

Images_and_LinkedIn_Profile(Data_Analysis)

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Data Wrangling & Cleaning

```
df <- read_csv("Data_Clean.csv")
df <- df %>%
  dplyr::select(!c(StartDate, EndDate, IPAddress, Status,
    RecordedDate, LocationLatitude, LocationLongitude, DistributionChannel,Q1))
```

```
df <- df %>% slice(-2)
```

```
asian_man_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, AttentionCheck)

asian_man_df <- asian_man_df %>%
  filter(Asian_Man_1 != "N/A")

colnames(asian_man_df) <- asian_man_df[1,]
asian_man_df <- asian_man_df[-1, ]
colnames(asian_man_df)[7] = "Attention_check"
```

```
asian_woman_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, AttentionCheck)

asian_woman_df <- asian_woman_df %>%
  filter(Asian_Woman_1 != "N/A")

colnames(asian_woman_df) <- asian_woman_df[1,]
asian_woman_df <- asian_woman_df[-1, ]
colnames(asian_woman_df)[7] = "Attention_check"
```

```
black_man_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, AttentionCheck)

black_man_df <- black_man_df %>%
  filter(Black_Man_1 != "N/A")

colnames(black_man_df) <- black_man_df[1,]
black_man_df <- black_man_df[-1, ]
colnames(black_man_df)[7] = "Attention_check"
```

```
black_woman_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attenti

black_woman_df <- black_woman_df %>%
  filter(Black_Woman_1 != "N/A")

colnames(black_woman_df) <- black_woman_df[1,]
black_woman_df <- black_woman_df[-1, ]
colnames(black_woman_df)[7] = "Attention_check"
```

```
blight_man_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attenti

blight_man_df <- blight_man_df %>%
  filter(Blight_Man_1 != "N/A")

colnames(blight_man_df) <- blight_man_df[1,]
blight_man_df <- blight_man_df[-1, ]
colnames(blight_man_df)[7] = "Attention_check"
```

```
blight_woman_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attenti

blight_woman_df <- blight_woman_df %>%
  filter(Blight_Woman_1 != "N/A")

colnames(blight_woman_df) <- blight_woman_df[1,]
blight_woman_df <- blight_woman_df[-1, ]
colnames(blight_woman_df)[7] = "Attention_check"
```

```
wasian_man_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attenti

wasian_man_df <- wasian_man_df %>%
  filter(Wasian_Man_1 != "N/A")

colnames(wasian_man_df) <- wasian_man_df[1,]
wasian_man_df <- wasian_man_df[-1, ]
colnames(wasian_man_df)[7] = "Attention_check"
```

```
wasian_woman_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attenti

wasian_woman_df <- wasian_woman_df %>%
  filter(Wasian_Woman_1 != "N/A")

colnames(wasian_woman_df) <- wasian_woman_df[1,]
wasian_woman_df <- wasian_woman_df[-1, ]
colnames(wasian_woman_df)[7] = "Attention_check"
```

```

white_man_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attention)

white_man_df <- white_man_df %>%
  filter(White_Man_1 != "N/A")

colnames(white_man_df) <- white_man_df[1,]
white_man_df <- white_man_df[-1, ]
colnames(white_man_df)[7] = "Attention_check"

white_woman_df <- df %>%
  dplyr::select(ResponseId, Column1, `Duration (in seconds)`, Progress, UserLanguage, Finished, Attention)

white_woman_df <- white_woman_df %>%
  filter(White_Woman_1 != "N/A")

colnames(white_woman_df) <- white_woman_df[1,]
white_woman_df <- white_woman_df[-1, ]
colnames(white_woman_df)[7] = "Attention_check"

new_df <- rbind(asian_man_df, asian_woman_df,
               black_man_df, black_woman_df,
               blight_man_df, blight_woman_df,
               wasian_man_df, wasian_woman_df,
               white_man_df, white_woman_df)

new_df = new_df[,!(names(new_df) %in% c("Timing - First Click", "Timing - Last Click"))]

colnames(new_df)[8] <- "timing_page_submit_LP"
colnames(new_df)[9] <- "click_count_LP"

colnames(new_df)[10] <- "item1_leader"
colnames(new_df)[11] <- "timing_leader"
colnames(new_df)[12] <- "click_count_leader"

colnames(new_df)[13] <- "item2_independent"
colnames(new_df)[14] <- "timing_independent"
colnames(new_df)[15] <- "click_count_independent"

colnames(new_df)[16] <- "item3_ambitious"
colnames(new_df)[17] <- "timing_ambitious"
colnames(new_df)[18] <- "click_count_ambitious"

colnames(new_df)[19] <- "item4_loyal"
colnames(new_df)[20] <- "timing_loyal"
colnames(new_df)[21] <- "click_count_loyal"

colnames(new_df)[22] <- "item5_sensitive"
colnames(new_df)[23] <- "timing_sensitive"
colnames(new_df)[24] <- "click_count_sensitive"

colnames(new_df)[25] <- "item6_warm"
colnames(new_df)[26] <- "timing_warm"

```

```

colnames(new_df)[27] <- "click_count_warm"

colnames(new_df)[28] <- "item7_compassionate"
colnames(new_df)[29] <- "timing_compassionate"
colnames(new_df)[30] <- "click_count_compassionate"

colnames(new_df)[31] <- "item8_adaptable"
colnames(new_df)[32] <- "timing_adaptable"
colnames(new_df)[33] <- "click_count_adaptable"

colnames(new_df)[34] <- "item9_sincere"
colnames(new_df)[35] <- "timing_sincere"
colnames(new_df)[36] <- "click_count_sincere"

colnames(new_df)[37] <- "item10_reliable"
colnames(new_df)[38] <- "timing_reliable"
colnames(new_df)[39] <- "click_count_reliable"

colnames(new_df)[40] <- "item11_truthful"
colnames(new_df)[41] <- "timing_truthful"
colnames(new_df)[42] <- "click_count_truthful"

colnames(new_df)[43] <- "item12_race"
colnames(new_df)[44] <- "timing_race"
colnames(new_df)[45] <- "click_count_race"

colnames(new_df)[46] <- "dem1_age"
colnames(new_df)[47] <- "dem2_gender"
colnames(new_df)[48] <- "dem3_ethnicity"
colnames(new_df)[49] <- "dem3_ethnicity_other"

colnames(new_df)[50] <- "dem4_employment_status"
colnames(new_df)[51] <- "dem5_occupation"

new_df <- new_df %>%
  filter(Finished == TRUE & Attention_check == "Digital Marketing Role")

fac_var <- c("Group", "item12_race", "dem2_gender", "dem3_ethnicity", "dem4_employment_status")
new_df <- new_df %>%
  mutate(across(fac_var, as.factor))

num_var <- c("Duration (in seconds)", "timing_page_submit_LP", "click_count_LP", "item1_leader", "timing")
new_df <- new_df %>%
  mutate(across(num_var, as.numeric))

```

Descriptive statistics

```
describe(new_df)
```

```
##               vars    n  mean    sd median trimmed   mad   min
```

| | | | | | | | | |
|------------------------------|----|--------|--------|--------|--------|----------|--------|-------|
| ## Response ID* | 1 | 608 | 304.50 | 175.66 | 304.50 | 304.50 | 225.36 | 1.00 |
| ## Group* | 2 | 608 | 5.48 | 2.86 | 5.00 | 5.48 | 2.97 | 1.00 |
| ## Duration (in seconds) | 3 | 608 | 209.88 | 179.03 | 162.00 | 175.32 | 69.68 | 43.00 |
| ## Progress* | 4 | 608 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| ## User Language* | 5 | 608 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| ## Finished* | 6 | 608 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| ## Attention_check* | 7 | 608 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| ## timing_page_submit_LP | 8 | 608 | 42.06 | 50.92 | 28.66 | 31.96 | 19.24 | 1.41 |
| ## click_count_LP | 9 | 608 | 1.78 | 4.02 | 0.00 | 0.85 | 0.00 | 0.00 |
| ## item1_leader | 10 | 608 | 5.74 | 1.05 | 6.00 | 5.85 | 1.48 | 1.00 |
| ## timing_leader | 11 | 608 | 11.76 | 14.70 | 8.35 | 9.29 | 4.92 | 1.64 |
| ## click_count_leader | 12 | 608 | 2.18 | 1.92 | 1.00 | 1.77 | 0.00 | 0.00 |
| ## item2_independent | 13 | 608 | 5.81 | 1.12 | 6.00 | 5.95 | 1.48 | 1.00 |
| ## timing_independent | 14 | 608 | 8.12 | 12.85 | 5.44 | 6.02 | 2.63 | 0.94 |
| ## click_count_independent | 15 | 608 | 1.88 | 1.45 | 1.00 | 1.58 | 0.00 | 0.00 |
| ## item3_ambitious | 16 | 608 | 6.14 | 1.03 | 6.00 | 6.30 | 1.48 | 1.00 |
| ## timing_ambitious | 17 | 608 | 8.08 | 19.04 | 4.59 | 5.04 | 2.02 | 0.99 |
| ## click_count_ambitious | 18 | 608 | 1.79 | 1.25 | 1.00 | 1.54 | 0.00 | 0.00 |
| ## item4_loyal | 19 | 608 | 5.13 | 1.21 | 5.00 | 5.14 | 1.48 | 1.00 |
| ## timing_loyal | 20 | 608 | 7.55 | 9.98 | 4.97 | 5.58 | 2.33 | 1.30 |
| ## click_count_loyal | 21 | 608 | 1.85 | 1.41 | 1.00 | 1.56 | 0.00 | 0.00 |
| ## item5_sensitive | 22 | 608 | 5.13 | 1.15 | 5.00 | 5.12 | 1.48 | 1.00 |
| ## timing_sensitive | 23 | 608 | 10.42 | 50.75 | 4.82 | 5.38 | 2.15 | 1.23 |
| ## click_count_sensitive | 24 | 608 | 1.88 | 1.41 | 1.00 | 1.61 | 0.00 | 0.00 |
| ## item6_warm | 25 | 608 | 5.10 | 1.20 | 5.00 | 5.14 | 1.48 | 1.00 |
| ## timing_warm | 26 | 608 | 6.59 | 12.51 | 4.15 | 4.47 | 1.75 | 1.18 |
| ## click_count_warm | 27 | 608 | 1.83 | 1.41 | 1.00 | 1.55 | 0.00 | 0.00 |
| ## item7_compassionate | 28 | 608 | 5.04 | 1.16 | 5.00 | 5.04 | 1.48 | 1.00 |
| ## timing_compassionate | 29 | 608 | 5.72 | 9.75 | 3.77 | 4.08 | 1.51 | 1.03 |
| ## click_count_compassionate | 30 | 608 | 1.77 | 1.40 | 1.00 | 1.51 | 0.00 | 0.00 |
| ## item8_adaptable | 31 | 608 | 5.83 | 1.00 | 6.00 | 5.93 | 1.48 | 1.00 |
| ## timing_adaptable | 32 | 608 | 5.99 | 9.61 | 3.90 | 4.20 | 1.56 | 1.03 |
| ## click_count_adaptable | 33 | 608 | 1.75 | 1.26 | 1.00 | 1.52 | 0.00 | 0.00 |
| ## item9_sincere | 34 | 608 | 5.44 | 1.17 | 6.00 | 5.51 | 1.48 | 1.00 |
| ## timing_sincere | 35 | 608 | 6.51 | 15.15 | 3.69 | 3.98 | 1.48 | 0.85 |
| ## click_count_sincere | 36 | 608 | 1.74 | 1.22 | 1.00 | 1.49 | 0.00 | 0.00 |
| ## item10_reliable | 37 | 608 | 6.03 | 0.99 | 6.00 | 6.16 | 1.48 | 2.00 |
| ## timing_reliable | 38 | 608 | 6.11 | 12.85 | 3.60 | 3.95 | 1.55 | 0.82 |
| ## click_count_reliable | 39 | 608 | 1.75 | 1.20 | 1.00 | 1.52 | 0.00 | 0.00 |
| ## item11_truthful | 40 | 608 | 5.65 | 1.11 | 6.00 | 5.74 | 1.48 | 1.00 |
| ## timing_truthful | 41 | 608 | 7.07 | 32.02 | 3.51 | 3.85 | 1.41 | 0.94 |
| ## click_count_truthful | 42 | 608 | 1.75 | 1.17 | 1.00 | 1.53 | 0.00 | 0.00 |
| ## item12_race* | 43 | 608 | 2.99 | 1.58 | 3.00 | 2.98 | 2.97 | 1.00 |
| ## timing_race | 44 | 608 | 15.65 | 40.67 | 10.36 | 11.48 | 6.13 | 1.86 |
| ## click_count_race | 45 | 608 | 2.23 | 2.35 | 1.00 | 1.73 | 0.00 | 0.00 |
| ## dem1_age | 46 | 608 | 37.25 | 8.14 | 36.00 | 37.25 | 8.90 | 20.00 |
| ## dem2_gender* | 47 | 608 | 2.58 | 0.52 | 3.00 | 2.62 | 0.00 | 1.00 |
| ## dem3_ethnicity* | 48 | 608 | 2.89 | 0.85 | 3.00 | 2.93 | 0.00 | 1.00 |
| ## dem3_ethnicity_other* | 49 | 608 | 14.83 | 1.28 | 15.00 | 15.00 | 0.00 | 1.00 |
| ## dem4_employment_status* | 50 | 608 | 1.11 | 0.46 | 1.00 | 1.00 | 0.00 | 1.00 |
| ## dem5_occupation* | 51 | 608 | 246.66 | 139.42 | 251.50 | 248.30 | 184.58 | 1.00 |
| ## | | | max | range | skew | kurtosis | se | |
| ## Response ID* | | 608.00 | 607.00 | 0.00 | -1.21 | 7.12 | | |
| ## Group* | | 10.00 | 9.00 | 0.00 | -1.21 | 0.12 | | |

| | | | | | |
|------------------------------|---------|---------|-------|--------|------|
| ## Duration (in seconds) | 2065.00 | 2022.00 | 4.84 | 34.35 | 7.26 |
| ## Progress* | 1.00 | 0.00 | NaN | NaN | 0.00 |
| ## User Language* | 1.00 | 0.00 | NaN | NaN | 0.00 |
| ## Finished* | 1.00 | 0.00 | NaN | NaN | 0.00 |
| ## Attention_check* | 1.00 | 0.00 | NaN | NaN | 0.00 |
| ## timing_page_submit_LP | 467.23 | 465.81 | 4.10 | 21.86 | 2.07 |
| ## click_count_LP | 39.00 | 39.00 | 4.58 | 27.33 | 0.16 |
| ## item1_leader | 7.00 | 6.00 | -1.04 | 2.09 | 0.04 |
| ## timing_leader | 208.16 | 206.52 | 7.36 | 75.18 | 0.60 |
| ## click_count_leader | 13.00 | 13.00 | 2.25 | 6.01 | 0.08 |
| ## item2_independent | 7.00 | 6.00 | -1.07 | 1.47 | 0.05 |
| ## timing_independent | 200.14 | 199.20 | 9.24 | 112.43 | 0.52 |
| ## click_count_independent | 12.00 | 12.00 | 2.10 | 5.92 | 0.06 |
| ## item3_ambitious | 7.00 | 6.00 | -1.41 | 2.58 | 0.04 |
| ## timing_ambitious | 257.49 | 256.50 | 8.72 | 87.63 | 0.77 |
| ## click_count_ambitious | 8.00 | 8.00 | 1.75 | 3.36 | 0.05 |
| ## item4_loyal | 7.00 | 6.00 | -0.29 | 0.16 | 0.05 |
| ## timing_loyal | 120.95 | 119.64 | 5.78 | 44.59 | 0.40 |
| ## click_count_loyal | 12.00 | 12.00 | 2.36 | 7.89 | 0.06 |
| ## item5_sensitive | 7.00 | 6.00 | -0.19 | -0.13 | 0.05 |
| ## timing_sensitive | 1152.78 | 1151.55 | 19.37 | 421.91 | 2.06 |
| ## click_count_sensitive | 10.00 | 10.00 | 1.92 | 4.42 | 0.06 |
| ## item6_warm | 7.00 | 6.00 | -0.36 | -0.01 | 0.05 |
| ## timing_warm | 169.46 | 168.28 | 7.85 | 74.59 | 0.51 |
| ## click_count_warm | 12.00 | 12.00 | 2.28 | 7.63 | 0.06 |
| ## item7_compassionate | 7.00 | 6.00 | -0.22 | 0.03 | 0.05 |
| ## timing_compassionate | 122.43 | 121.40 | 7.70 | 70.01 | 0.40 |
| ## click_count_compassionate | 19.00 | 19.00 | 4.24 | 38.88 | 0.06 |
| ## item8_adaptable | 7.00 | 6.00 | -0.93 | 1.40 | 0.04 |
| ## timing_adaptable | 106.76 | 105.73 | 6.48 | 49.22 | 0.39 |
| ## click_count_adaptable | 14.00 | 14.00 | 2.82 | 16.29 | 0.05 |
| ## item9_sincere | 7.00 | 6.00 | -0.62 | 0.39 | 0.05 |
| ## timing_sincere | 257.56 | 256.71 | 10.32 | 140.49 | 0.61 |
| ## click_count_sincere | 8.00 | 8.00 | 1.80 | 3.45 | 0.05 |
| ## item10_reliable | 7.00 | 5.00 | -1.06 | 1.17 | 0.04 |
| ## timing_reliable | 205.53 | 204.71 | 9.83 | 124.16 | 0.52 |
| ## click_count_reliable | 10.00 | 10.00 | 2.00 | 5.74 | 0.05 |
| ## item11_truthful | 7.00 | 6.00 | -0.74 | 0.54 | 0.05 |
| ## timing_truthful | 639.00 | 638.06 | 15.85 | 278.80 | 1.30 |
| ## click_count_truthful | 8.00 | 8.00 | 1.60 | 2.86 | 0.05 |
| ## item12_race* | 5.00 | 4.00 | -0.06 | -1.61 | 0.06 |
| ## timing_race | 896.08 | 894.22 | 17.63 | 363.51 | 1.65 |
| ## click_count_race | 25.00 | 25.00 | 4.20 | 28.80 | 0.10 |
| ## dem1_age | 50.00 | 30.00 | 0.20 | -1.01 | 0.33 |
| ## dem2_gender* | 3.00 | 2.00 | -0.63 | -0.94 | 0.02 |
| ## dem3_ethnicity* | 6.00 | 5.00 | 0.30 | 4.09 | 0.03 |
| ## dem3_ethnicity_other* | 15.00 | 14.00 | -8.21 | 70.33 | 0.05 |
| ## dem4_employment_status* | 3.00 | 2.00 | 3.82 | 12.67 | 0.02 |
| ## dem5_occupation* | 481.00 | 480.00 | -0.05 | -1.22 | 5.65 |

```

new_df <- new_df %>%
  mutate(masculinity = (item1_leader + item2_independent + item3_ambitious) / 3,
         femininity = (item4_loyal + item5_sensitive + item6_warm + item7_compassionate) / 4,
         neutral = (item8_adaptable + item9_sincere + item10_reliable + item11_truthful) / 4)

```

```
aggregated_scale <- new_df[ , c("masculinity", "femininity", "neutral")]
alpha(aggregated_scale)
```

```
## Number of categories should be increased in order to count frequencies.
```

```
##
## Reliability analysis
## Call: alpha(x = aggregated_scale)
##
##      raw_alpha std.alpha G6(smc) average_r S/N   ase mean   sd median_r
##      0.84      0.84      0.82      0.64 5.4 0.012  5.6 0.82      0.69
##
##      95% confidence boundaries
##              lower alpha upper
## Feldt      0.82  0.84  0.86
## Duhachek  0.82  0.84  0.86
##
## Reliability if an item is dropped:
##      raw_alpha std.alpha G6(smc) average_r S/N alpha se var.r med.r
## masculinity      0.86      0.86      0.76      0.76 6.3   0.011  NA  0.76
## femininity       0.82      0.82      0.69      0.69 4.5   0.015  NA  0.69
## neutral          0.65      0.65      0.48      0.48 1.9   0.028  NA  0.48
##
## Item statistics
##      n raw.r std.r r.cor r.drop mean   sd
## masculinity 608  0.82  0.83  0.70  0.62  5.9 0.90
## femininity  608  0.87  0.86  0.77  0.67  5.1 1.02
## neutral     608  0.93  0.94  0.91  0.85  5.7 0.89
```

all the aggregated scales highly correlate with the overall scale (highest corr neutral = 0.93)
so dropping neutral would have the most impact on alpha value, while dropping masculinity or femininity

```
new_df <- new_df %>%
  mutate(total_response_time = timing_leader + timing_independent + timing_ambitious +
    timing_loyal + timing_sensitive + timing_warm + timing_compassionate +
    timing_adaptable + timing_sincere + timing_reliable + timing_truthful)
```

Data Visualizations

```
total_response_time_bygroup <- new_df %>%
  group_by(Group) %>%
  summarise(Mean = mean(total_response_time), Sd = sd(total_response_time))
total_response_time_bygroup
```

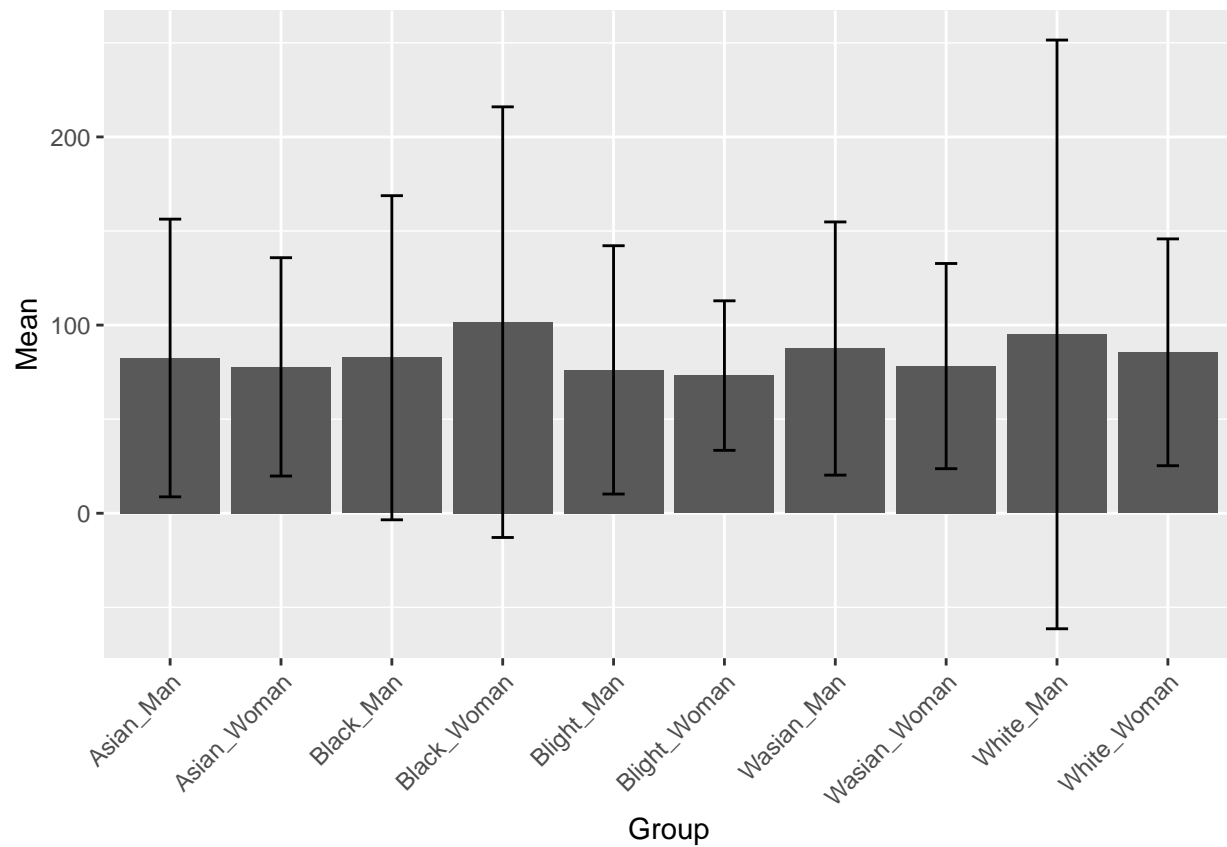
```
## # A tibble: 10 x 3
##   Group      Mean    Sd
##   <fct>    <dbl> <dbl>
## 1 Asian_Man  82.5  73.8
## 2 Asian_Woman 77.8  58.0
```

```
## 3 Black_Man      82.7  86.1
## 4 Black_Woman  102.  114.
## 5 Blight_Man    76.2  66.0
## 6 Blight_Woman  73.2  39.7
## 7 Wasian_Man    87.5  67.3
## 8 Wasian_Woman  78.2  54.5
## 9 White_Man     95.1 156.
## 10 White_Woman  85.5  60.3
```

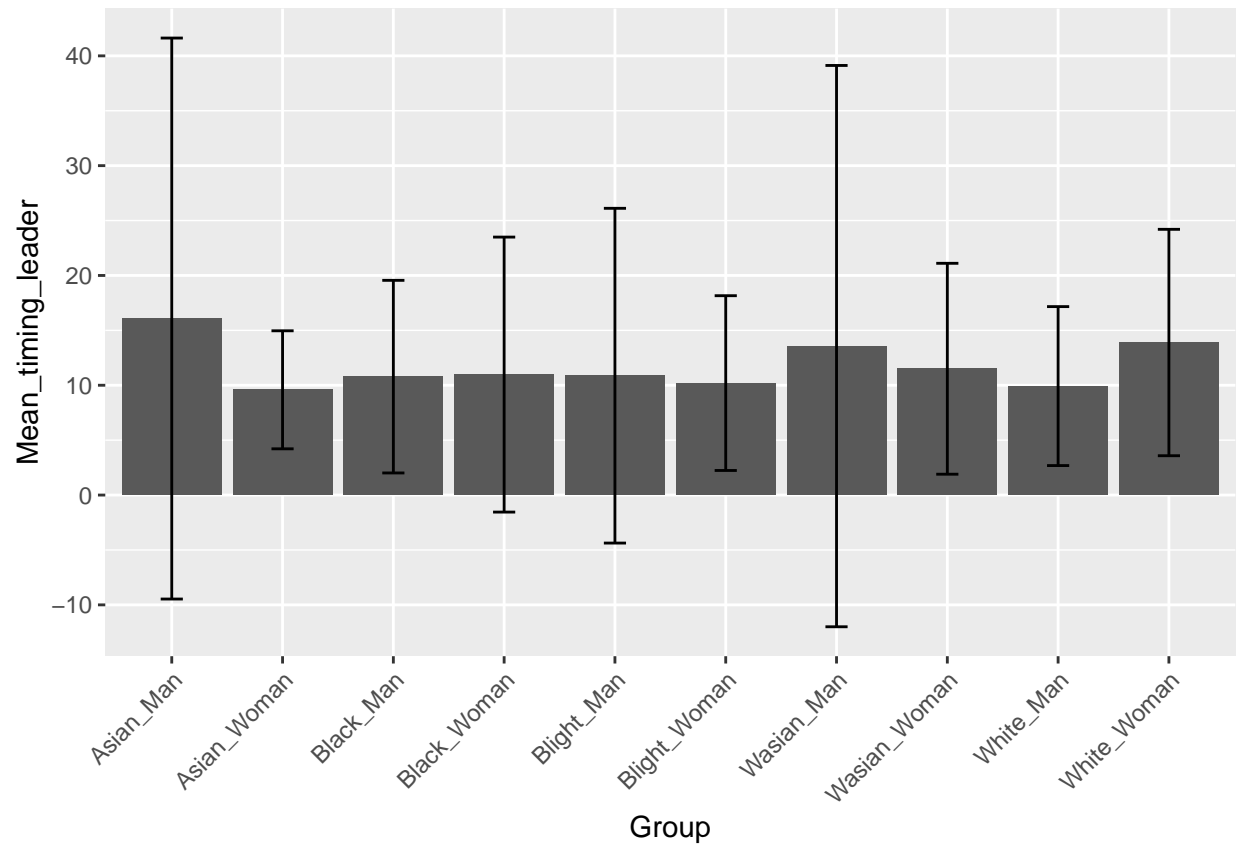
```
item_wise_response_time_bygroup <- new_df %>%
  group_by(Group) %>%
  summarise(Mean_timing_leader = mean(timing_leader), Sd_timing_leader = sd(timing_leader),
    Mean_timing_independent = mean(timing_independent), Sd_timing_independent = sd(timing_independent),
    Mean_timing_ambitious = mean(timing_ambitious), Sd_timing_ambitious = sd(timing_ambitious),
    Mean_timing_loyal = mean(timing_loyal), Sd_timing_loyal = sd(timing_loyal),
    Mean_timing_sensitive = mean(timing_sensitive), Sd_timing_sensitive = sd(timing_sensitive),
    Mean_timing_warm = mean(timing_warm), Sd_timing_warm = sd(timing_warm),
    Mean_timing_compassionate = mean(timing_compassionate), Sd_timing_compassionate = sd(timing_compassionate),
    Mean_timing_adaptable = mean(timing_adaptable), Sd_timing_adaptable = sd(timing_adaptable),
    Mean_timing_sincere = mean(timing_sincere), Sd_timing_sincere = sd(timing_sincere),
    Mean_timing_reliable = mean(timing_reliable), Sd_timing_reliable = sd(timing_reliable),
    Mean_timing_truthful = mean(timing_truthful), Sd_timing_truthful = sd(timing_truthful))
item_wise_response_time_bygroup
```

```
## # A tibble: 10 x 23
##   Group      Mean_timing_leader Sd_timing_leader Mean_timing_independent
##   <fct>          <dbl>          <dbl>          <dbl>
## 1 Asian_Man      16.1            25.5            8.94
## 2 Asian_Woman     9.59            5.37            6.78
## 3 Black_Man      10.8            8.77            8.73
## 4 Black_Woman    11.0            12.5            6.16
## 5 Blight_Man     10.9            15.2            6.84
## 6 Blight_Woman   10.2            7.96            6.95
## 7 Wasian_Man     13.6            25.6           10.5
## 8 Wasian_Woman   11.5            9.60            7.84
## 9 White_Man       9.92            7.24           10.5
## 10 White_Woman   13.9            10.3            7.99
## # i 19 more variables: Sd_timing_independent <dbl>,
## #   Mean_timing_ambitious <dbl>, Sd_timing_ambitious <dbl>,
## #   Mean_timing_loyal <dbl>, Sd_timing_loyal <dbl>,
## #   Mean_timing_sensitive <dbl>, Sd_timing_sensitive <dbl>,
## #   Mean_timing_warm <dbl>, Sd_timing_warm <dbl>,
## #   Mean_timing_compassionate <dbl>, Sd_timing_compassionate <dbl>,
## #   Mean_timing_adaptable <dbl>, Sd_timing_adaptable <dbl>, ...
```

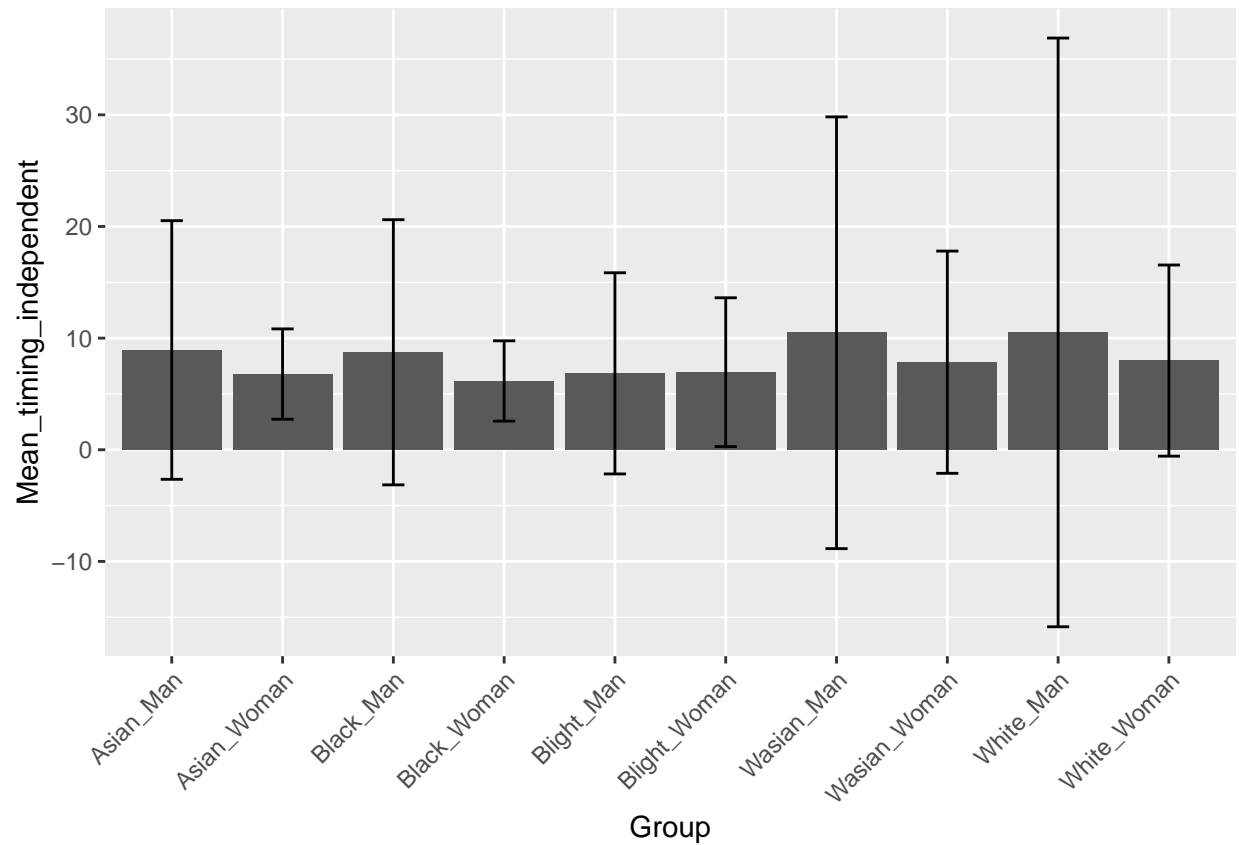
```
## histogram
total_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean - Sd, ymax = Mean + Sd),
    width = 0.2, position = position_dodge(width = 0.5)) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```

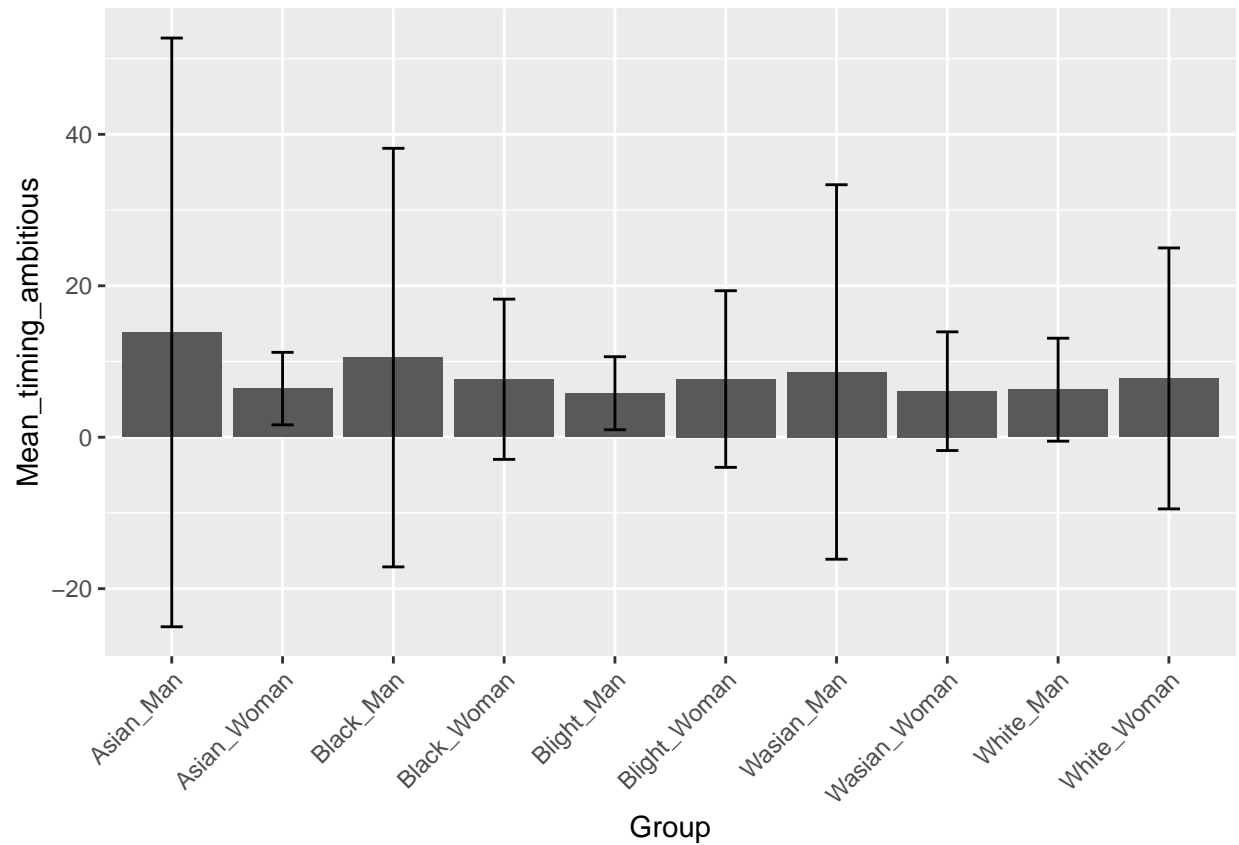
```
# item1 leader
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_leader)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_leader - Sd_timing_leader, ymax = Mean_timing_leader + Sd_timing_leader,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



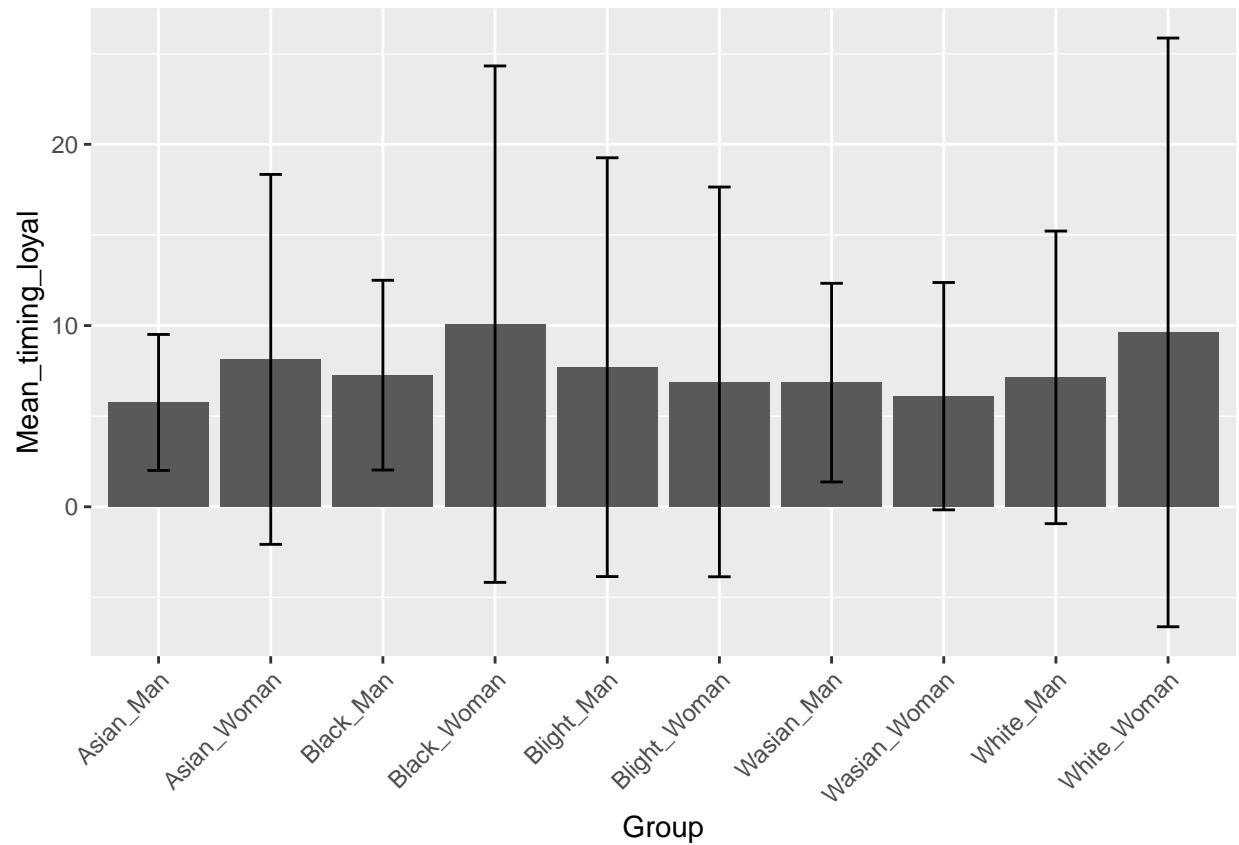
```
#item2 independent
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_independent)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_independent - Sd_timing_independent, ymax = Mean_timing_independent + Sd_timing_independent,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



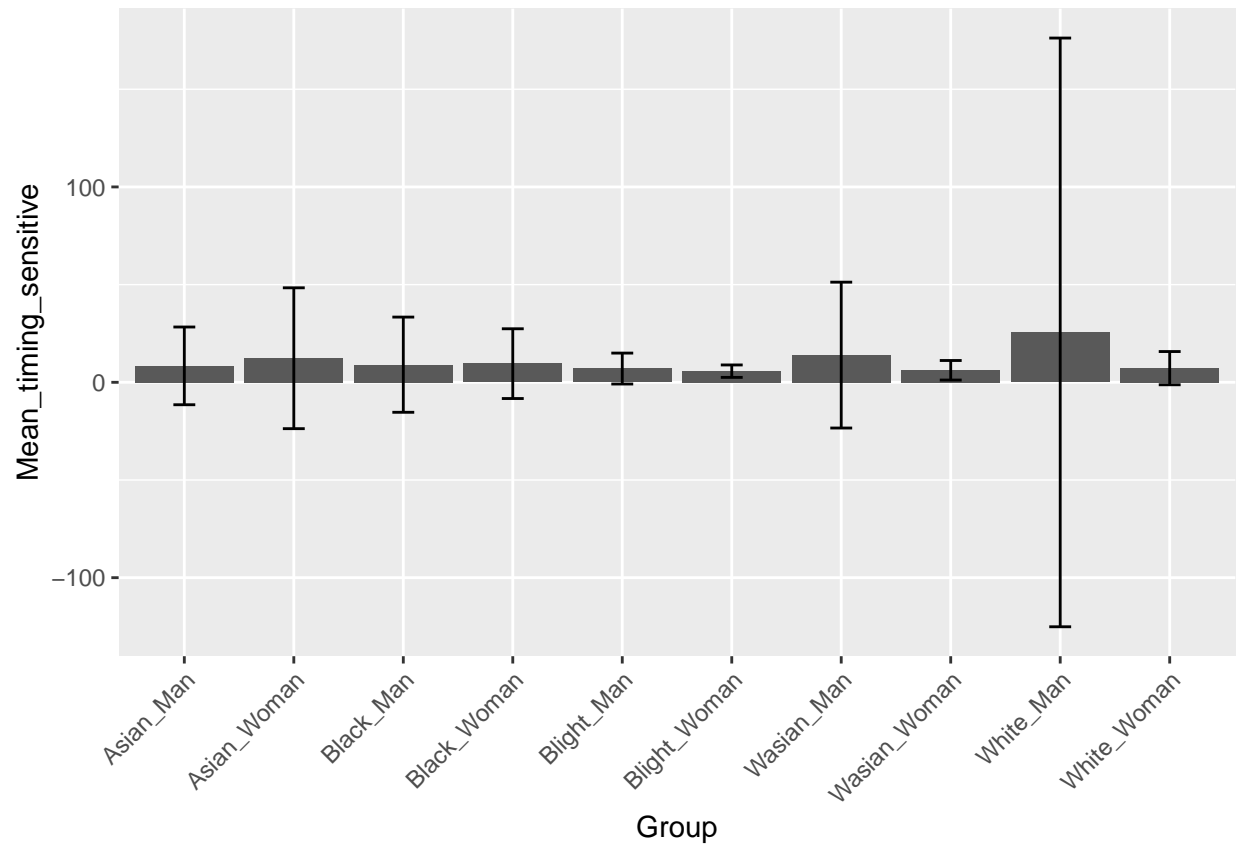
```
# item3 ambitious
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_ambitious)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_ambitious - Sd_timing_ambitious, ymax = Mean_timing_ambitious + Sd_timing_ambitious,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



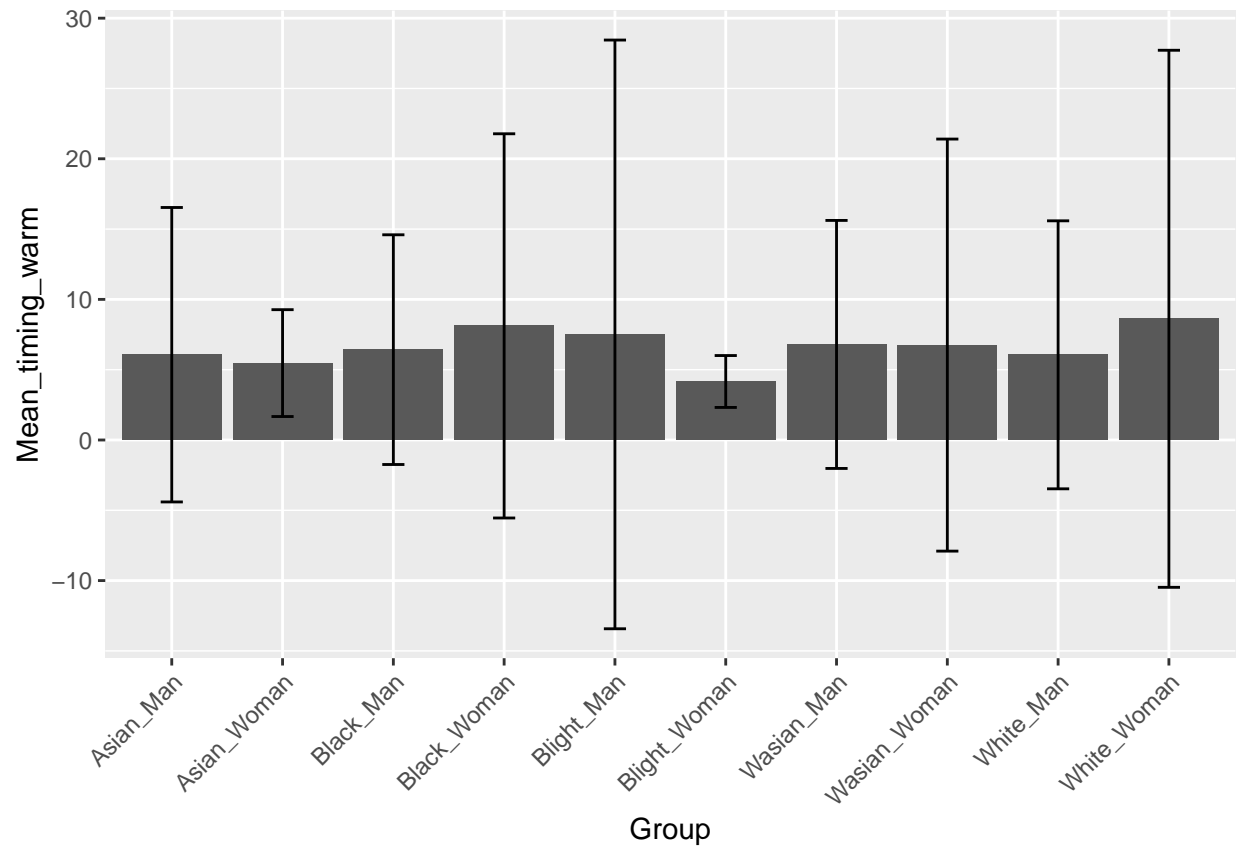
```
# item4 loyal
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_loyal)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_loyal - Sd_timing_loyal, ymax = Mean_timing_loyal + Sd_timing_loyal,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



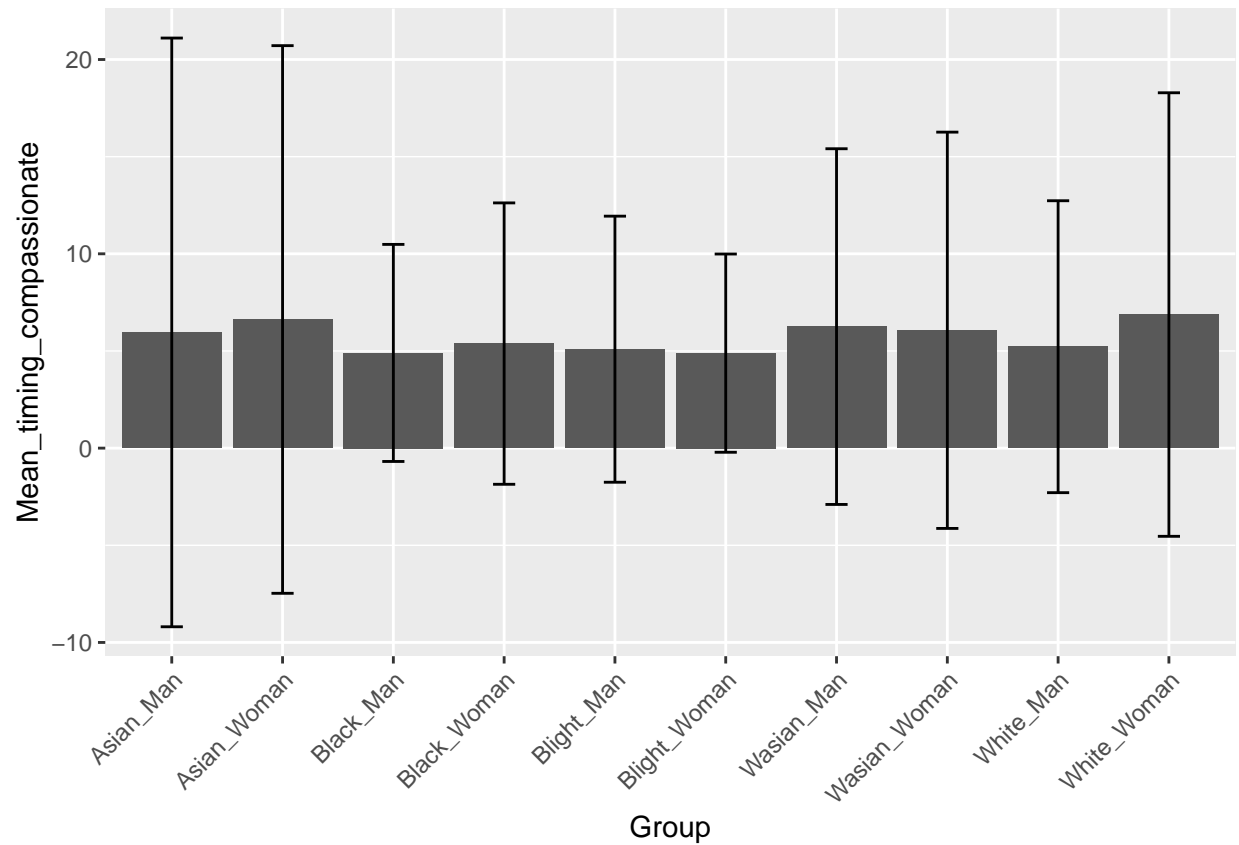
```
# item5 sensitive
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_sensitive)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_sensitive - Sd_timing_sensitive, ymax = Mean_timing_sensitive + Sd_timing_sensitive,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



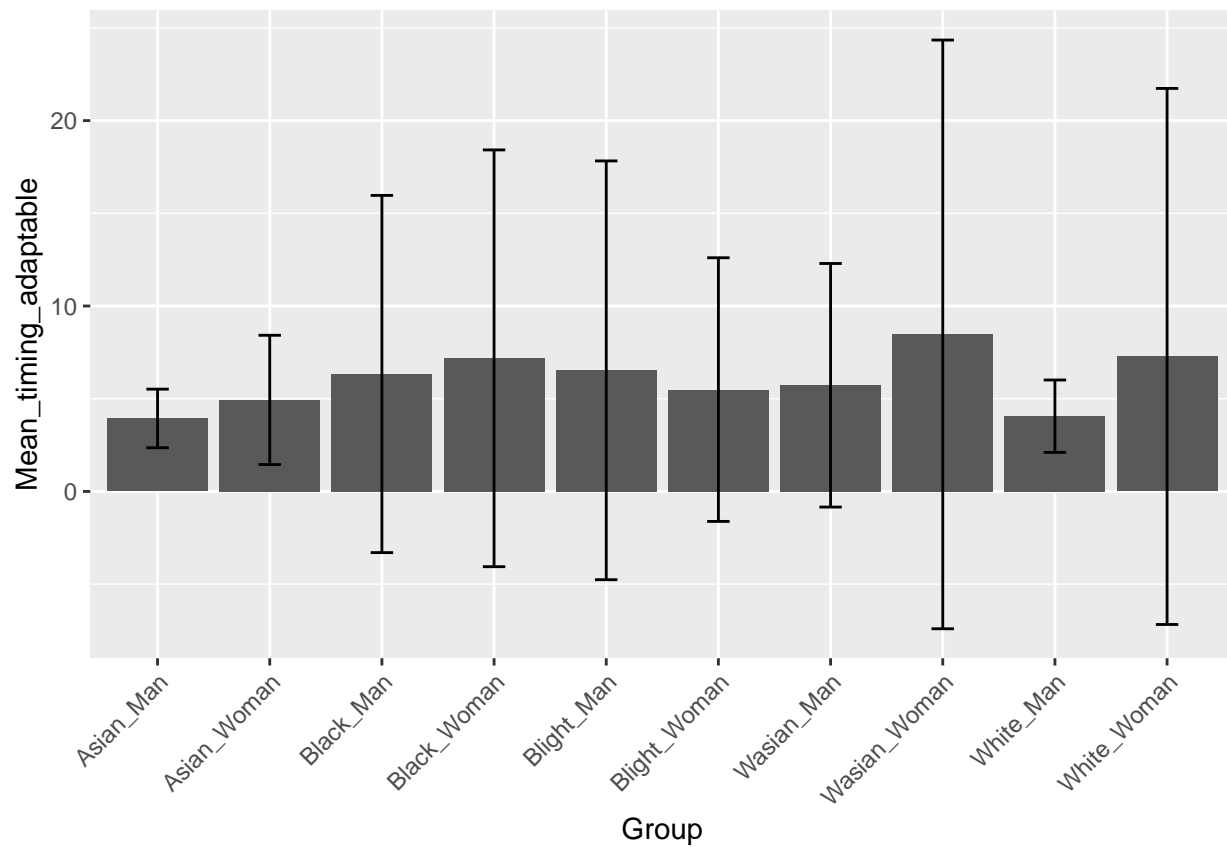
```
# item6 warm
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_warm)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_warm - Sd_timing_warm, ymax = Mean_timing_warm + Sd_timing_warm),
    width = 0.2, position = position_dodge(width = 0.5)) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



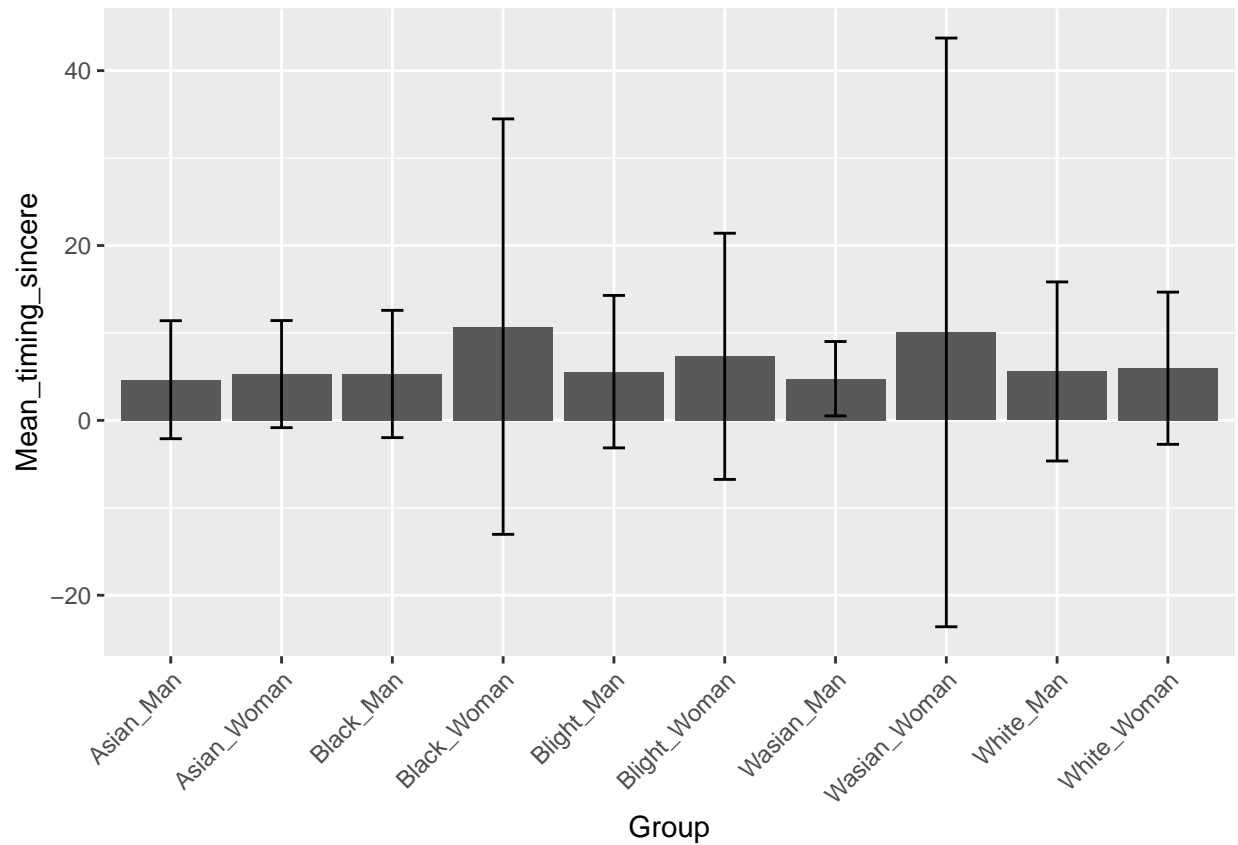
```
# item7 compassionate
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_compassionate)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_compassionate - Sd_timing_compassionate, ymax = Mean_timing_compassionate + Sd_timing_compassionate,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



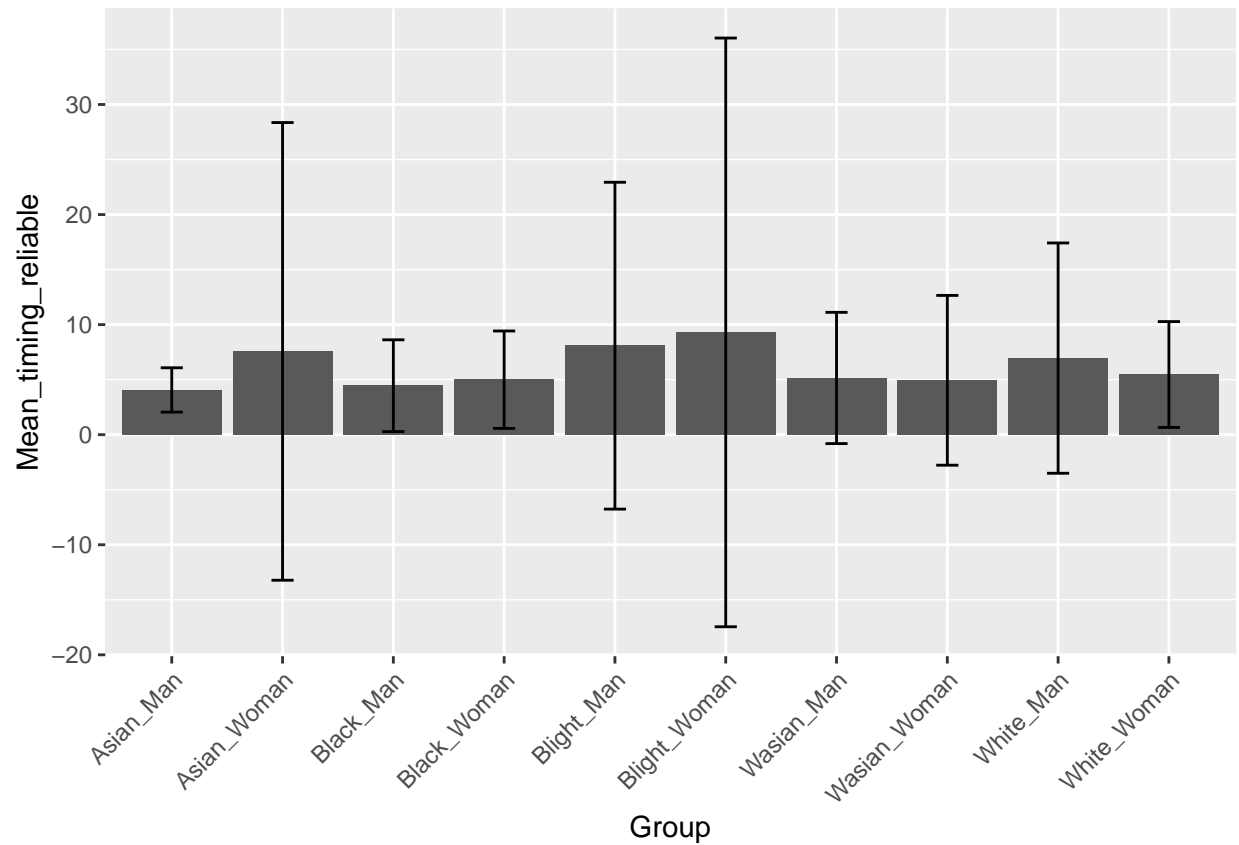
```
# item8 adaptable
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_adaptable)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_adaptable - Sd_timing_adaptable, ymax = Mean_timing_adaptable + Sd_timing_adaptable,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```

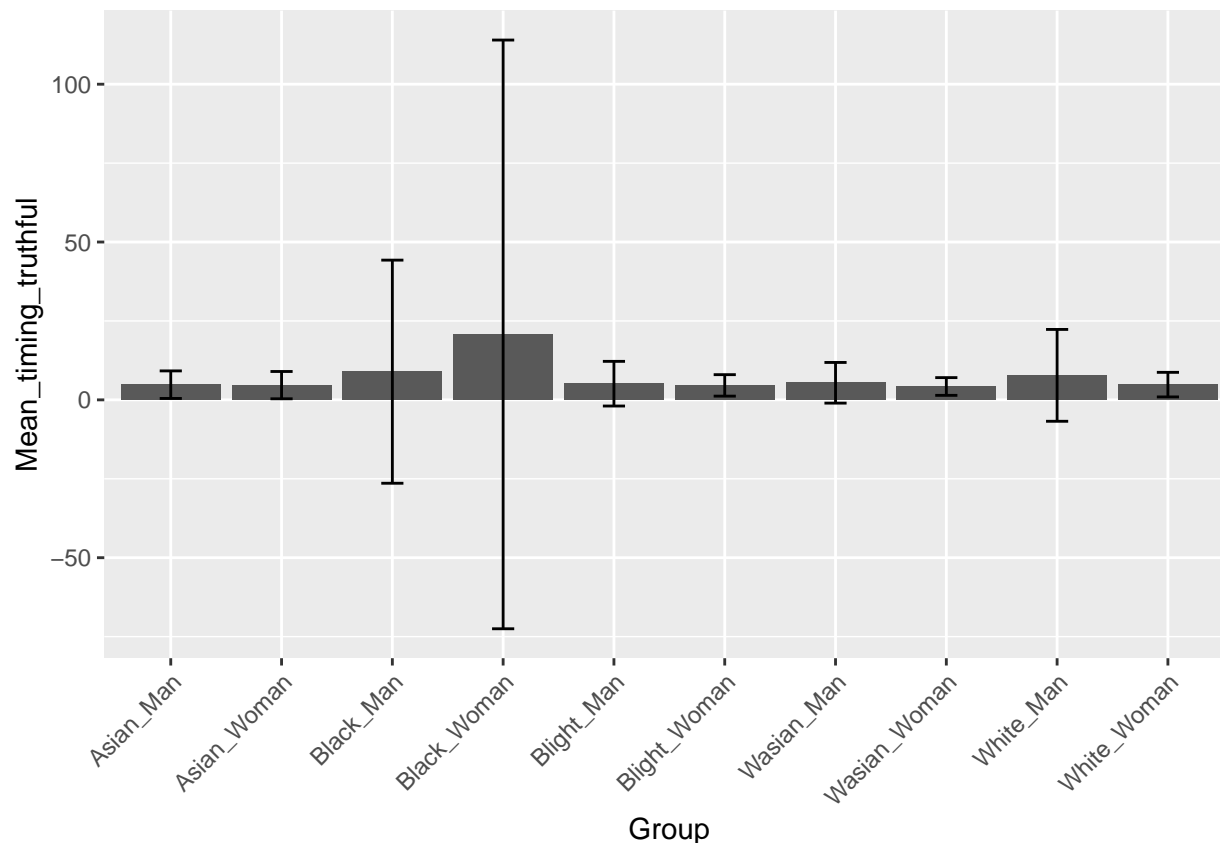
```
# item9 sincere
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_sincere)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_sincere - Sd_timing_sincere, ymax = Mean_timing_sincere + Sd_timing_sincere,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
# item10 reliable
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_reliable)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_reliable - Sd_timing_reliable, ymax = Mean_timing_reliable + Sd_
                    width = 0.2, position = position_dodge(width = 0.5)) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
# item11 truthful
item_wise_response_time_bygroup %>%
  ggplot(aes(x = Group, y = Mean_timing_truthful)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_timing_truthful - Sd_timing_truthful, ymax = Mean_timing_truthful + Sd_
                    width = 0.2, position = position_dodge(width = 0.5)) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
mean_item_rating_bygroup <- new_df %>%
  group_by(Group) %>%
  summarise(Mean_item1_leader = mean(item1_leader), Sd_item1_leader = sd(item1_leader),
    Mean_item2_independent = mean(item2_independent), Sd_item2_independent = sd(item2_independent),
    Mean_item3_ambitious = mean(item3_ambitious), Sd_item3_ambitious = sd(item3_ambitious),
    Mean_item4_loyal = mean(item4_loyal), Sd_item4_loyal = sd(item4_loyal),
    Mean_item5_sensitive = mean(item5_sensitive), Sd_item5_sensitive = sd(item5_sensitive),
    Mean_item6_warm = mean(item6_warm), Sd_item6_warm = sd(item6_warm),
    Mean_item7_compassionate = mean(item7_compassionate), Sd_item7_compassionate = sd(item7_compassionate),
    Mean_item8_adaptable = mean(item8_adaptable), Sd_item8_adaptable = sd(item8_adaptable),
    Mean_item9_sincere = mean(item9_sincere), Sd_item9_sincere = sd(item9_sincere),
    Mean_item10_reliable = mean(item10_reliable), Sd_item10_reliable = sd(item10_reliable),
    Mean_item11_truthful = mean(item11_truthful), Sd_item11_truthful = sd(item11_truthful))
mean_item_rating_bygroup
```

```
## # A tibble: 10 x 23
##   Group      Mean_item1_leader Sd_item1_leader Mean_item2_independent
##   <fct>          <dbl>          <dbl>          <dbl>
## 1 Asian_Man      5.58            1.24            5.81
## 2 Asian_Woman    5.6             1.06            5.58
## 3 Black_Man      5.57            1.35            5.7
## 4 Black_Woman    5.9             1.02            5.83
## 5 Blight_Man     6.02            0.852           5.90
## 6 Blight_Woman   5.82            0.840           5.85
## 7 Wasian_Man     5.94            0.965           5.90
```

```
## 8 Wasian_Woman          5.63          0.938          5.83
## 9 White_Man             5.59          1.04          5.76
## 10 White_Woman          5.72          1.03          5.92
## # i 19 more variables: Sd_item2_independent <dbl>, Mean_item3_ambitious <dbl>,
## #   Sd_item3_ambitious <dbl>, Mean_item4_loyal <dbl>, Sd_item4_loyal <dbl>,
## #   Mean_item5_sensitive <dbl>, Sd_item5_sensitive <dbl>,
## #   Mean_item6_warm <dbl>, Sd_item6_warm <dbl>, Mean_item7_compassionate <dbl>,
## #   Sd_item7_compassionate <dbl>, Mean_item8_adaptable <dbl>,
## #   Sd_item8_adaptable <dbl>, Mean_item9_sincere <dbl>, Sd_item9_sincere <dbl>,
## #   Mean_item10_reliable <dbl>, Sd_item10_reliable <dbl>, ...
```

```
## histogram
```

```
mean_item_rating_bygroup %>%
```

```
  ggplot(aes(x = Group, y = Mean_item1_leader)) +
```

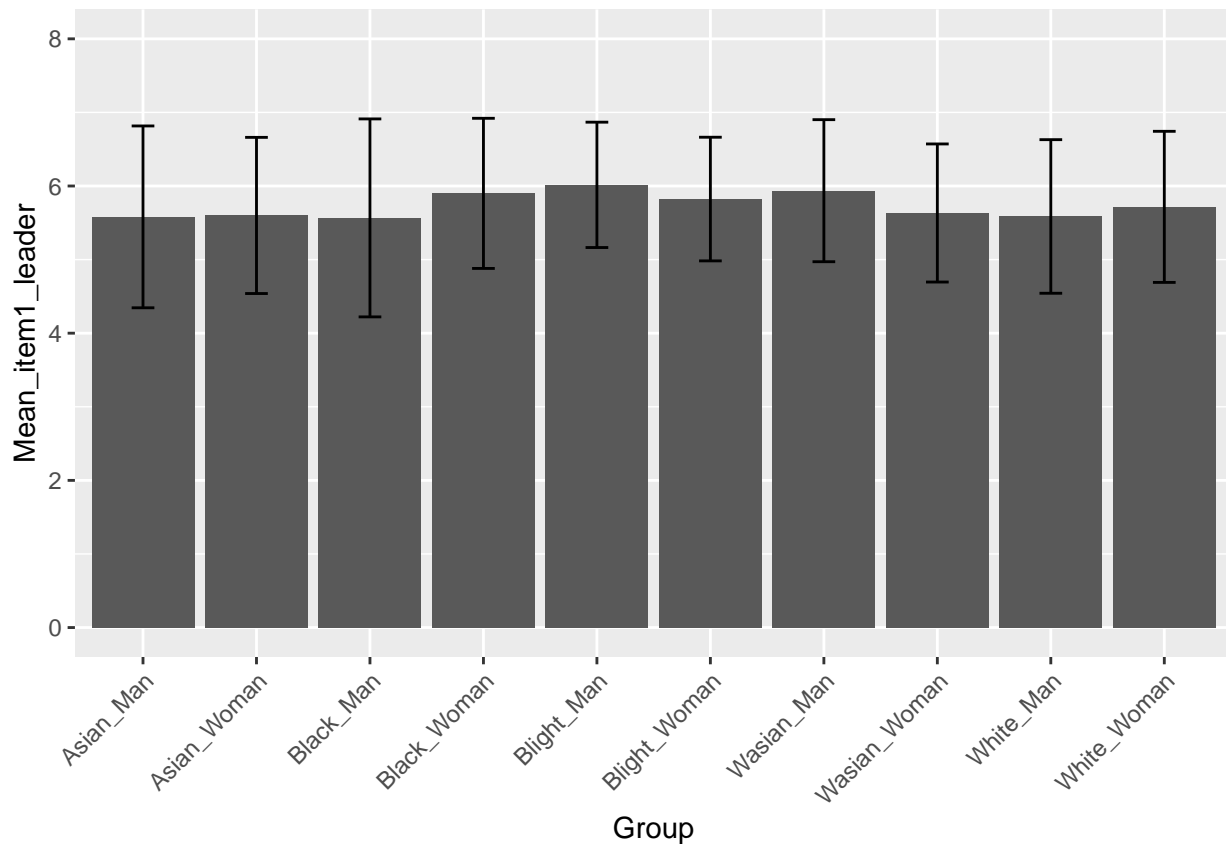
```
  geom_col() +
```

```
  geom_errorbar(aes(ymin = Mean_item1_leader - Sd_item1_leader, ymax = Mean_item1_leader + Sd_item1_leader,
```

```
                    width = 0.2, position = position_dodge(width = 0.5)) +
```

```
  ylim(0, 8) +
```

```
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
# item1 leader
```

```
mean_item_rating_bygroup %>%
```

```
  ggplot(aes(x = Group, y = Mean_item2_independent)) +
```

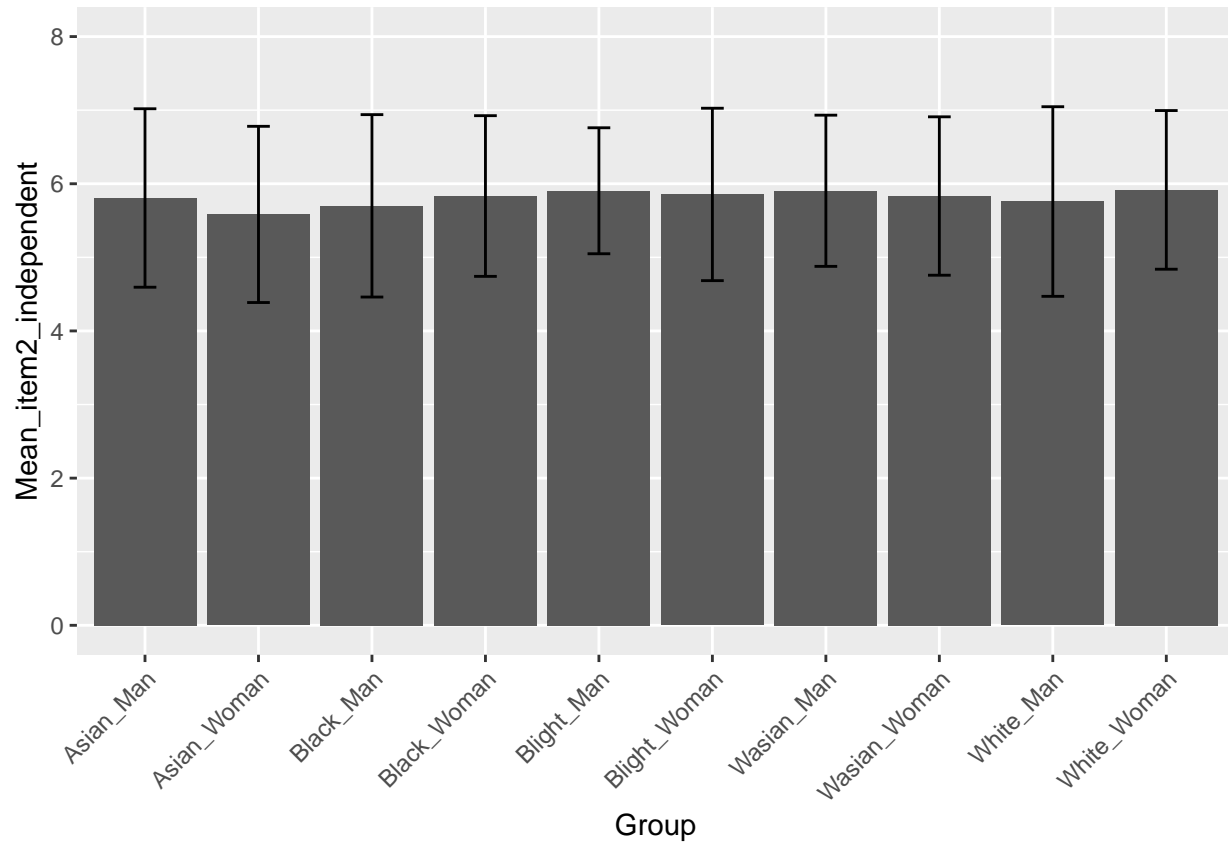
```
  geom_col() +
```

```
  geom_errorbar(aes(ymin = Mean_item2_independent - Sd_item2_independent, ymax = Mean_item2_independent
```

```

width = 0.2, position = position_dodge(width = 0.5)) +
ylim(0, 8) +
theme(axis.text.x = element_text(angle = 45, hjust = 1))

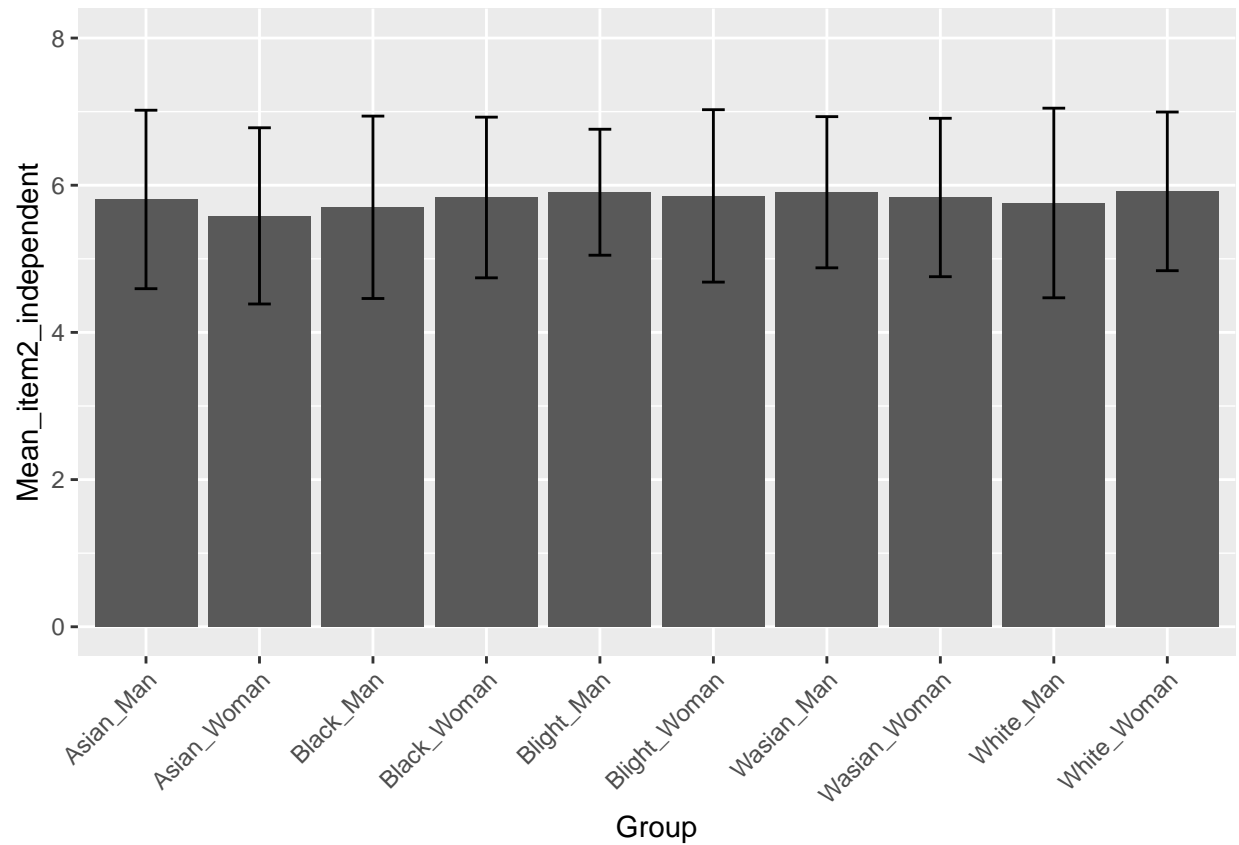
```



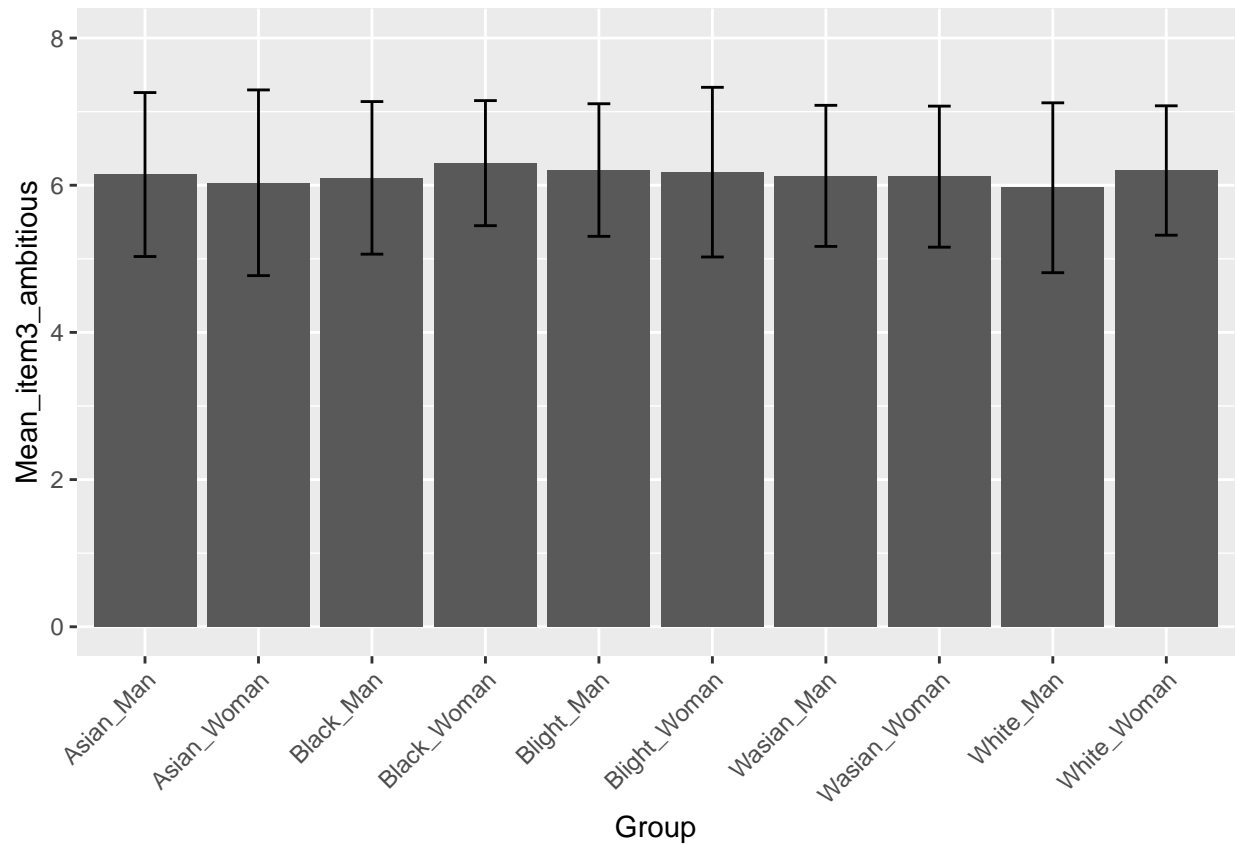
```

#item2 independent
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item2_independent)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item2_independent - Sd_item2_independent, ymax = Mean_item2_independent +
                    Sd_item2_independent,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

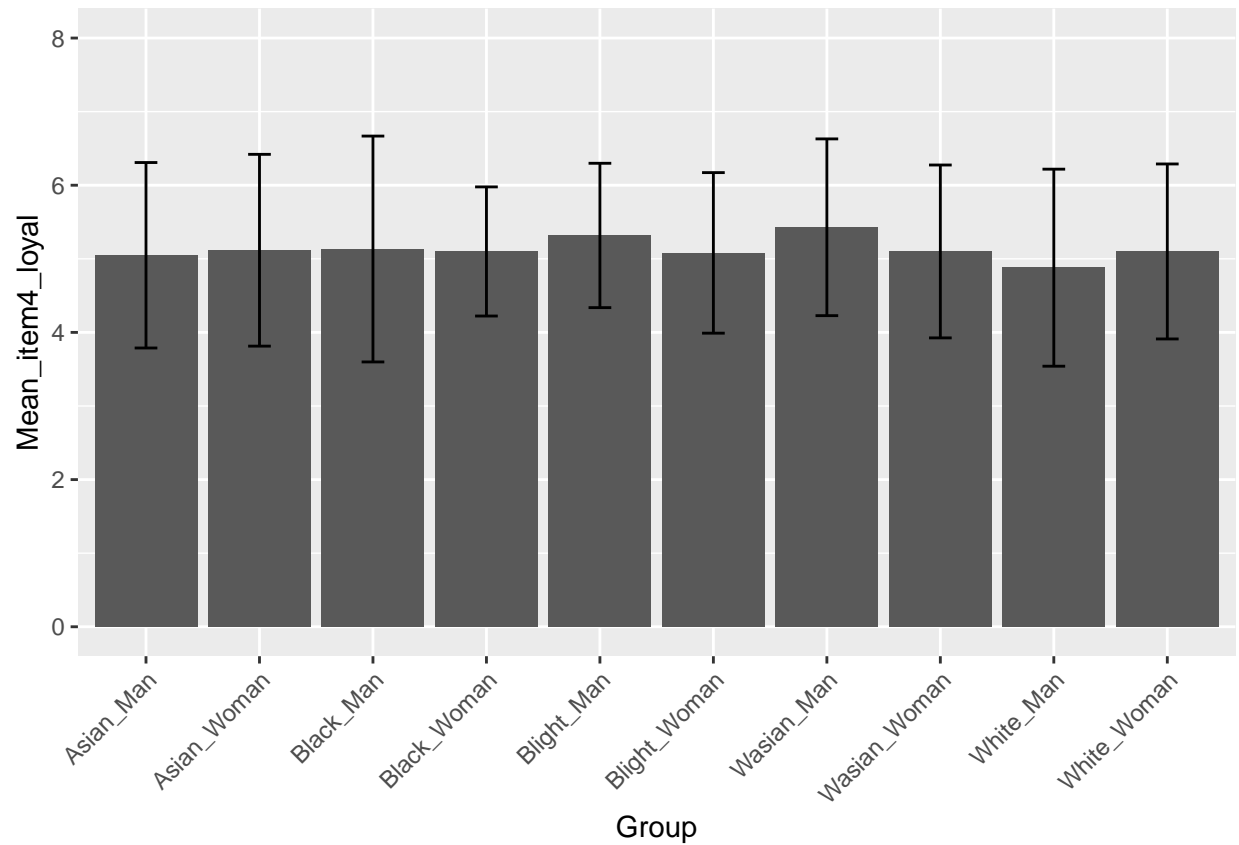
```



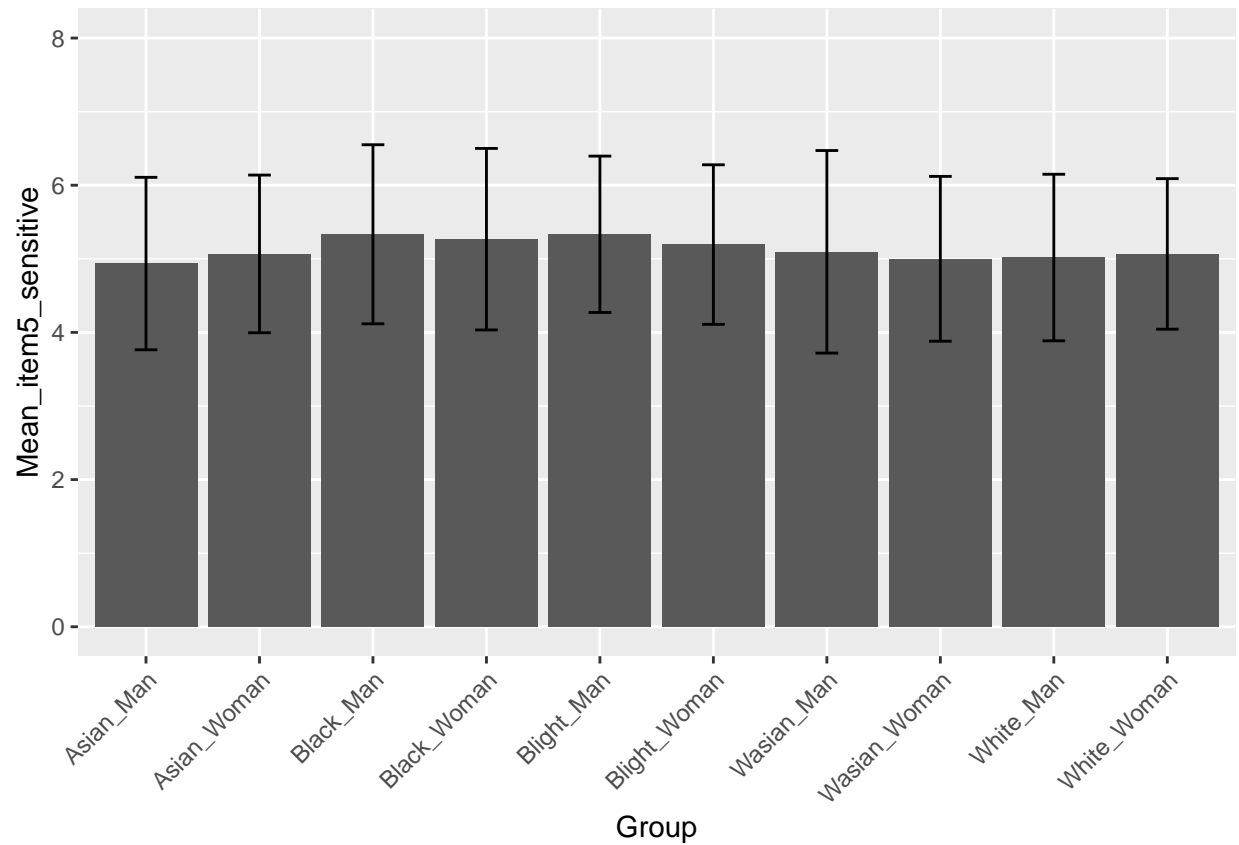
```
# item3 ambitious
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item3_ambitious)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item3_ambitious - Sd_item3_ambitious, ymax = Mean_item3_ambitious + Sd_
                  width = 0.2, position = position_dodge(width = 0.5))) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



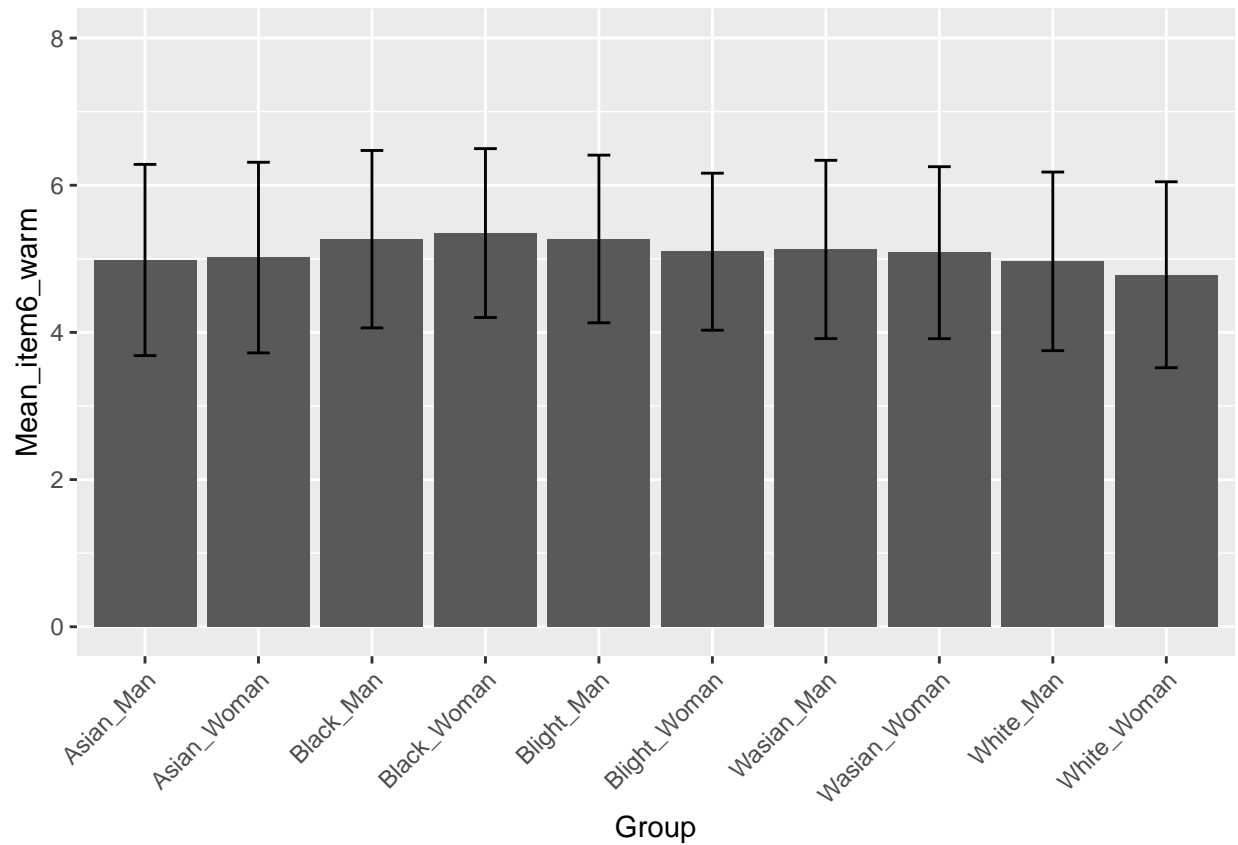
```
# item4_loyal
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item4_loyal)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item4_loyal - Sd_item4_loyal, ymax = Mean_item4_loyal + Sd_item4_loyal),
    width = 0.2, position = position_dodge(width = 0.5)) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```

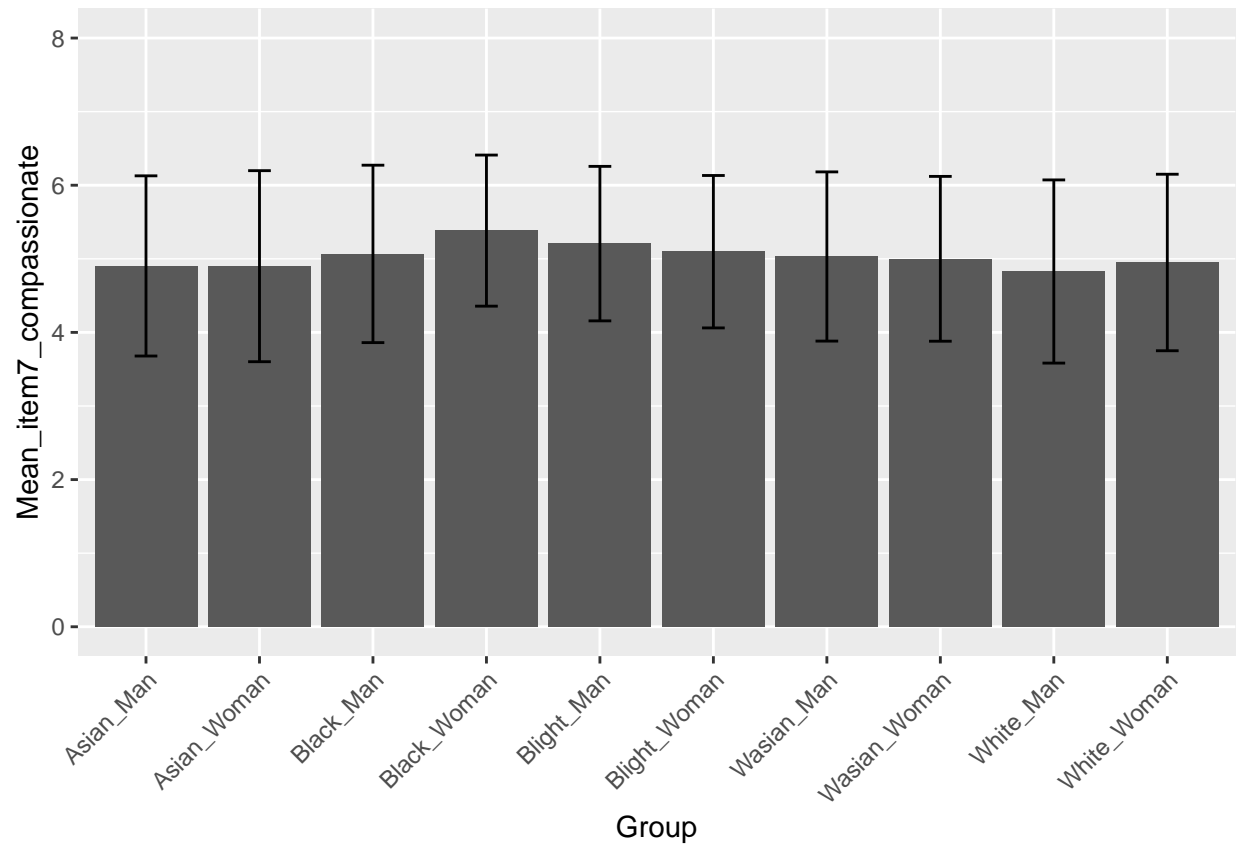
```
# item5 sensitive
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item5_sensitive)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item5_sensitive - Sd_item5_sensitive, ymax = Mean_item5_sensitive + Sd_
                    width = 0.2, position = position_dodge(width = 0.5)) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



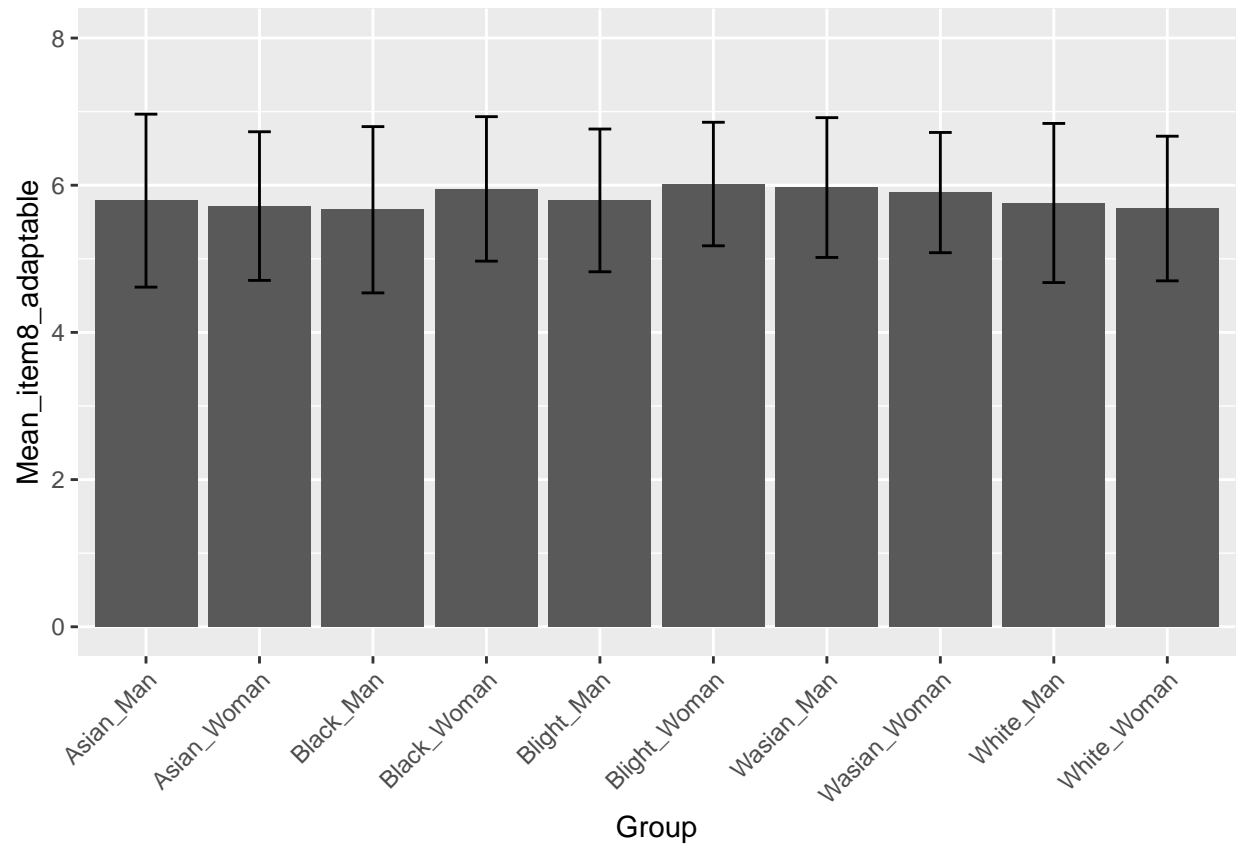
```
# item6 warm
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item6_warm)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item6_warm - Sd_item6_warm, ymax = Mean_item6_warm + Sd_item6_warm),
    width = 0.2, position = position_dodge(width = 0.5)) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



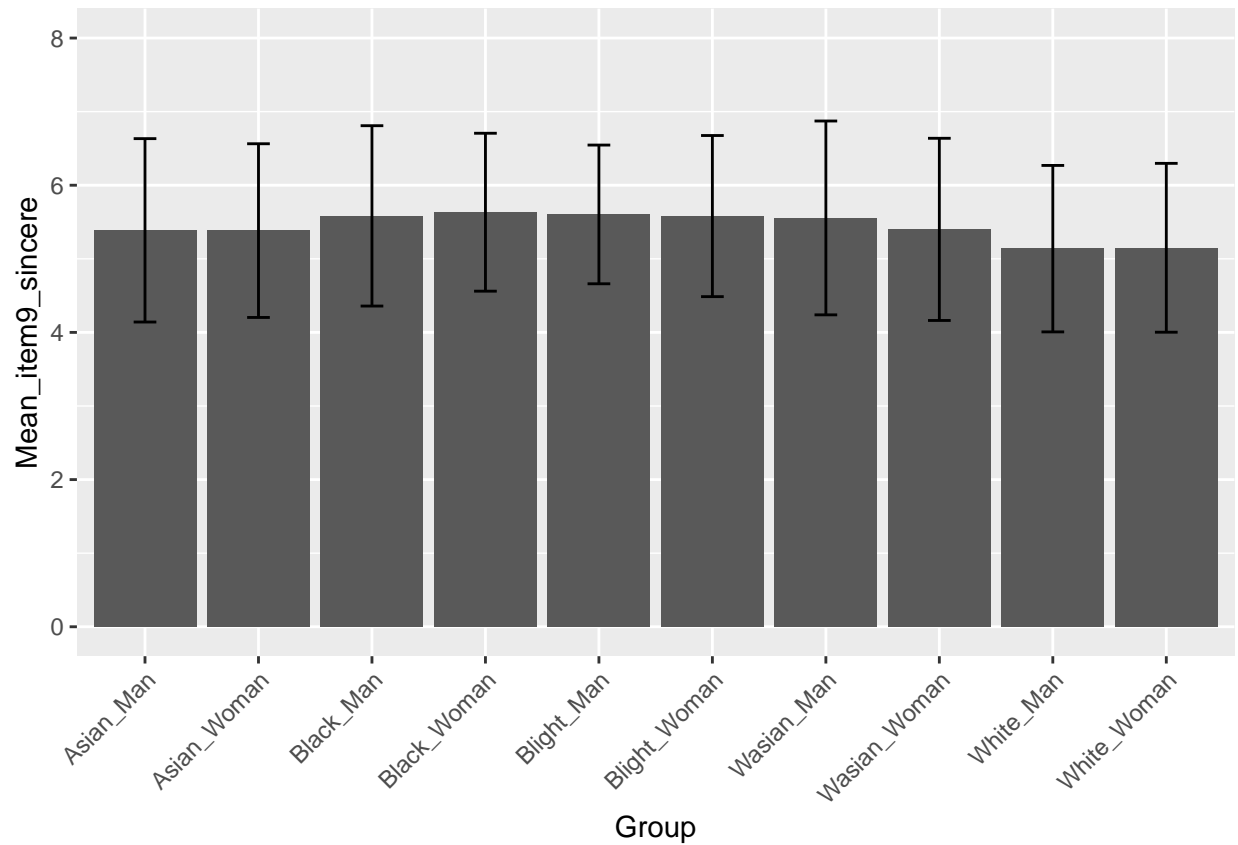
```
# item7 compassionate
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item7_compassionate)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item7_compassionate - Sd_item7_compassionate, ymax = Mean_item7_compassionate + Sd_item7_compassionate,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



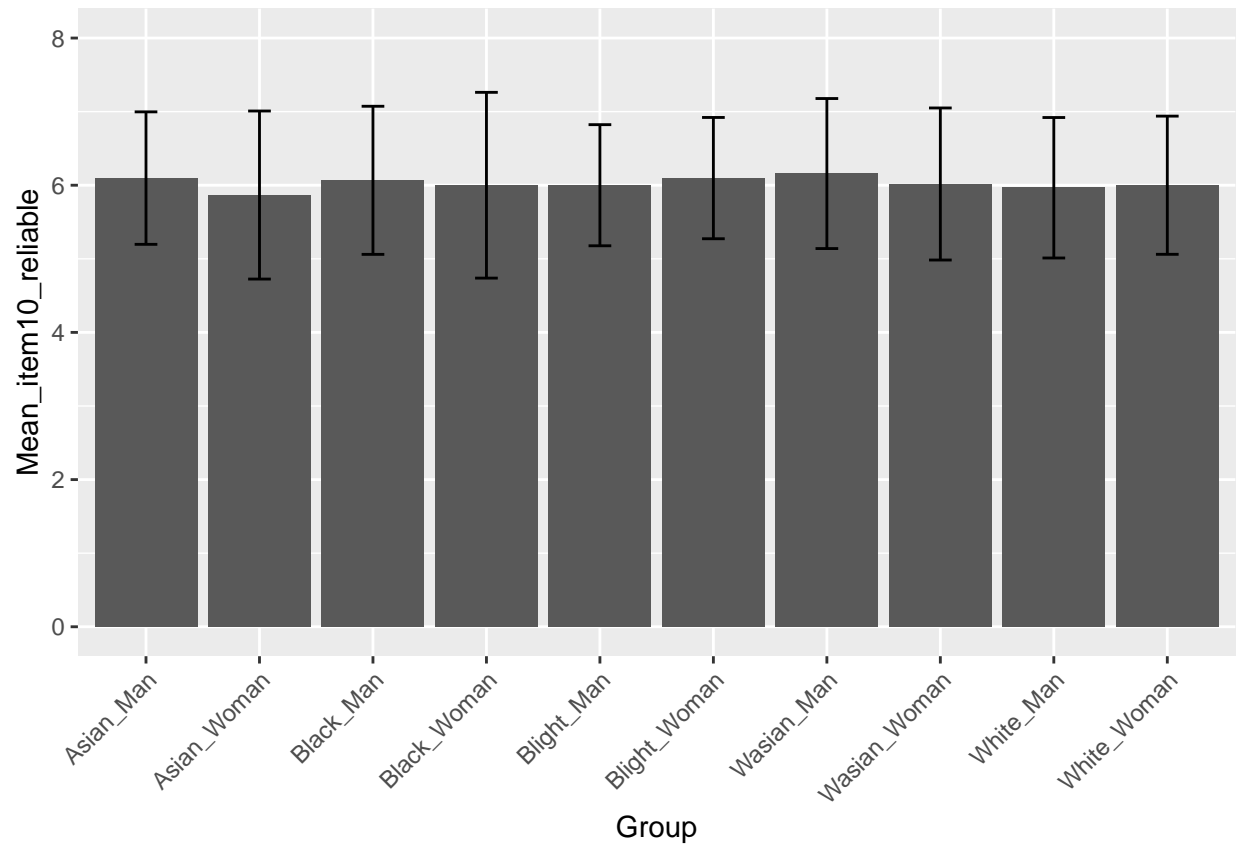
```
# item8 adaptable
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item8_adaptable)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item8_adaptable - Sd_item8_adaptable, ymax = Mean_item8_adaptable + Sd_
                  width = 0.2, position = position_dodge(width = 0.5)) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



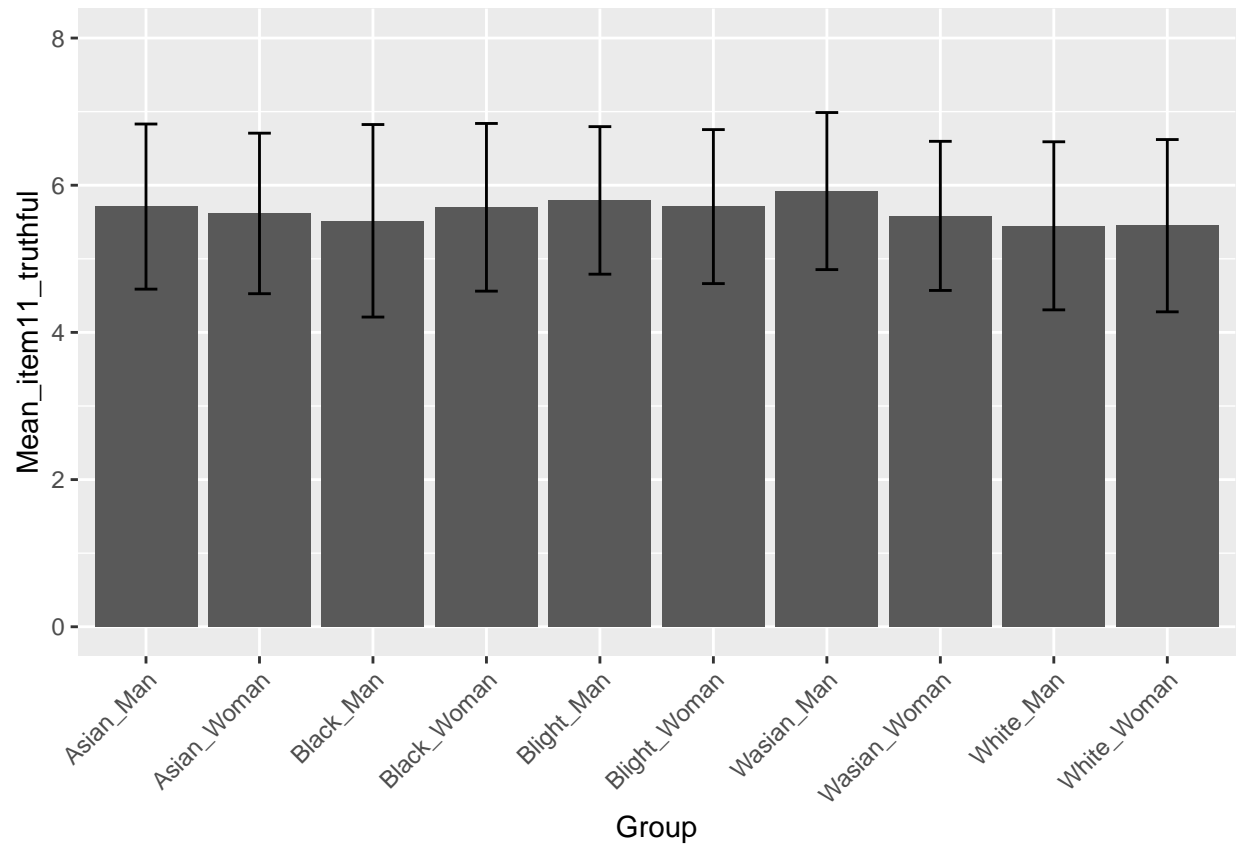
```
# item9 sincere
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item9_sincere)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item9_sincere - Sd_item9_sincere, ymax = Mean_item9_sincere + Sd_item9_sincere,
                    width = 0.2, position = position_dodge(width = 0.5))) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
# item10 reliable
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item10_reliable)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item10_reliable - Sd_item10_reliable, ymax = Mean_item10_reliable + Sd_
                    width = 0.2, position = position_dodge(width = 0.5)) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
# item11 truthful
mean_item_rating_bygroup %>%
  ggplot(aes(x = Group, y = Mean_item11_truthful)) +
  geom_col() +
  geom_errorbar(aes(ymin = Mean_item11_truthful - Sd_item11_truthful, ymax = Mean_item11_truthful + Sd_
                    width = 0.2, position = position_dodge(width = 0.5)) +
  ylim(0, 8) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



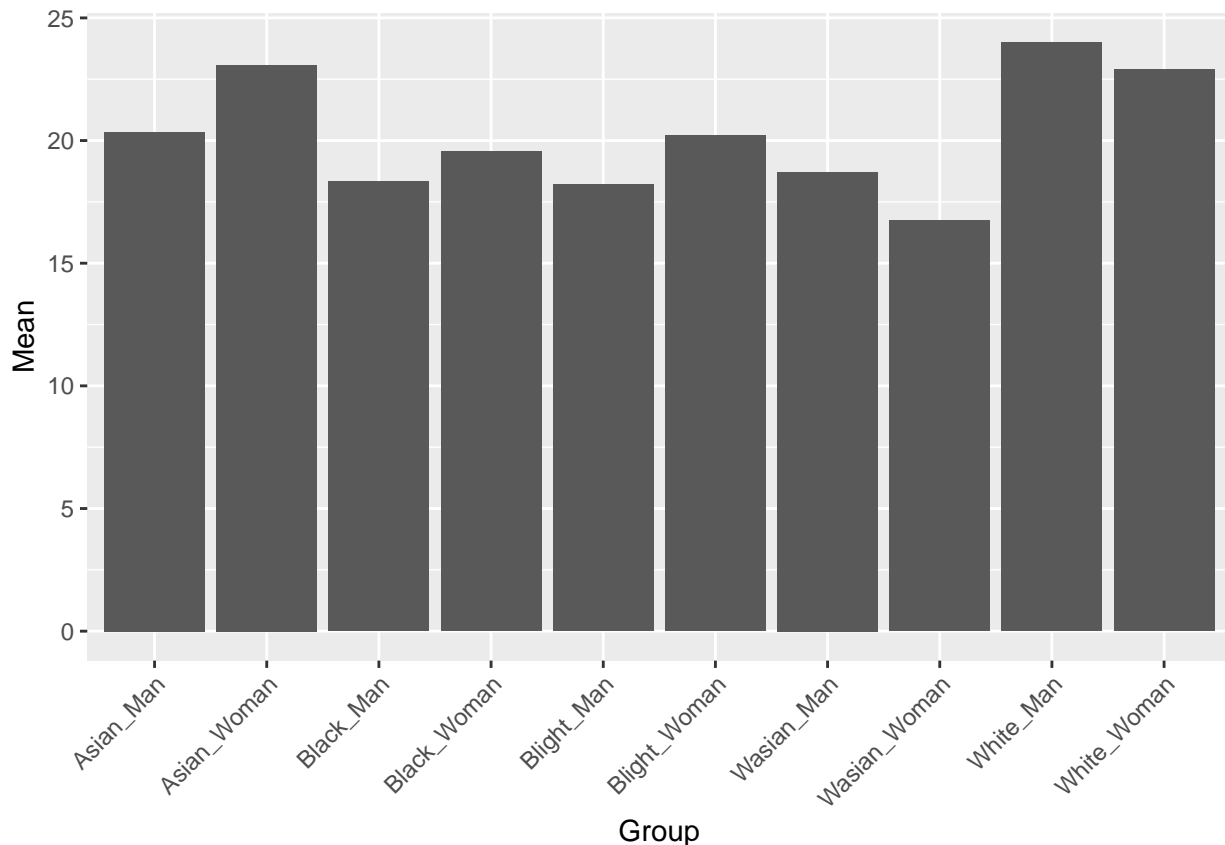
```
new_df <- new_df %>%
  mutate(sum_click_count = click_count_leader + click_count_independent + click_count_ambitious + click_count_sensitive + click_count_warm + click_count_compassionate + click_count_sincere + click_count_reliable + click_count_truthful)

Mean_total_click_count <- new_df %>%
  group_by(Group) %>%
  summarise(Mean = mean(sum_click_count), Sd = sd(sum_click_count))
Mean_total_click_count
```

```
## # A tibble: 10 x 3
##   Group      Mean    Sd
##   <fct>    <dbl> <dbl>
## 1 Asian_Man  20.4  12.2
## 2 Asian_Woman 23.1  14.1
## 3 Black_Man  18.3  11.4
## 4 Black_Woman 19.6  12.6
## 5 Blight_Man 18.2  12.7
## 6 Blight_Woman 20.2  13.0
## 7 Wasian_Man 18.7  11.3
## 8 Wasian_Woman 16.7   7.73
## 9 White_Man  24    14.6
## 10 White_Woman 22.9  16.6
```



```
Mean_total_click_count %>%
  ggplot(aes(x = Group, y = Mean)) +
  geom_col() +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



```
Mean_click_count <- new_df %>%
  group_by(Group) %>%
  summarise(mean_cc_leader = mean(click_count_leader), sd_cc_leader = sd(click_count_leader),
            mean_cc_independent = mean(click_count_independent), sd_cc_independent = sd(click_count_independent),
            mean_cc_ambitious = mean(click_count_ambitious), sd_cc_ambitious = sd(click_count_ambitious),
            mean_cc_loyal = mean(click_count_loyal), sd_cc_loyal = sd(click_count_loyal),
            mean_cc_sensitive = mean(click_count_sensitive), sd_cc_sensitive = sd(click_count_sensitive),
            mean_cc_warm = mean(click_count_warm), sd_cc_warm = sd(click_count_warm),
            mean_cc_compassionate = mean(click_count_compassionate), sd_cc_compassionate = sd(click_count_compassionate),
            mean_cc_adaptable = mean(click_count_adaptable), sd_cc_adaptable = sd(click_count_adaptable),
            mean_cc_sincere = mean(click_count_sincere), sd_cc_sincere = sd(click_count_sincere),
            mean_cc_reliable = mean(click_count_reliable), sd_cc_reliable = sd(click_count_reliable),
            mean_cc_truthful = mean(click_count_truthful), sd_cc_truthful = sd(click_count_truthful))
```

Mean_click_count

```
## # A tibble: 10 x 23
##   Group      mean_cc_leader sd_cc_leader mean_cc_independent sd_cc_independent
##   <fct>          <dbl>         <dbl>          <dbl>          <dbl>
## 1 Asian_Man      2.26          2.07          2.08          1.71
```

```
## 2 Asian_Woman      2.57      1.95      2.17      1.61
## 3 Black_Man        1.9       1.24      1.73      1.19
## 4 Black_Woman      2.32      2.33      1.75      1.30
## 5 Blight_Man       1.81      1.59      1.67      1.30
## 6 Blight_Wom~     2.24      2.38      1.77      1.36
## 7 Wasian_Man       1.86      1.44      1.68      1.15
## 8 Wasian_Wom~     1.68      0.911     1.6       1.24
## 9 White_Man        2.72      2.33      2.33      1.55
## 10 White_Woman     2.47      2.23      2.08      1.89
## # i 18 more variables: mean_cc_ambitious <dbl>, sd_cc_ambitious <dbl>,
## #   mean_cc_loyal <dbl>, sd_cc_loyal <dbl>, mean_cc_sensitive <dbl>,
## #   sd_cc_sensitive <dbl>, mean_cc_warm <dbl>, sd_cc_warm <dbl>,
## #   mean_cc_compassionate <dbl>, sd_cc_compassionate <dbl>,
## #   mean_cc_adaptable <dbl>, sd_cc_adaptable <dbl>, mean_cc_sincere <dbl>,
## #   sd_cc_sincere <dbl>, mean_cc_reliable <dbl>, sd_cc_reliable <dbl>,
## #   mean_cc_truthful <dbl>, sd_cc_truthful <dbl>
```

Hypothesis Testing

```
H1_m <- aov(masculinity ~ Group, data = new_df)
summary(H1_m)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9      6.4  0.7061    0.871  0.551
## Residuals 598    485.0  0.8111
```

```
# ANOVA indicates no difference among groups but still running Post-hoc
TukeyHSD(H1_m)
```

```
## Tukey multiple comparisons of means
## 95% family-wise confidence level
##
## Fit: aov(formula = masculinity ~ Group, data = new_df)
##
## $Group
##           diff          lwr          upr      p adj
## Asian_Woman-Asian_Man -0.105197133 -0.6231535 0.4127593 0.9997503
## Black_Man-Asian_Man   -0.055197133 -0.5731535 0.4627593 0.9999990
## Black_Woman-Asian_Man  0.167025090 -0.3509313 0.6849815 0.9907555
## Blight_Man-Asian_Man   0.198242021 -0.3134088 0.7098928 0.9672886
## Blight_Woman-Asian_Man 0.107526882 -0.4061664 0.6212202 0.9996798
## Wasian_Man-Asian_Man   0.145331968 -0.3663188 0.6569828 0.9963911
## Wasian_Woman-Asian_Man 0.017025090 -0.5009313 0.5349815 1.0000000
## White_Man-Asian_Man   -0.073971079 -0.5964461 0.4485040 0.9999882
## White_Woman-Asian_Man  0.100358423 -0.4175980 0.6183148 0.9998310
## Black_Man-Asian_Woman  0.050000000 -0.4721847 0.5721847 0.9999996
## Black_Woman-Asian_Woman 0.272222222 -0.2499625 0.7944069 0.8197701
## Blight_Man-Asian_Woman 0.303439153 -0.2124916 0.8193699 0.6909297
## Blight_Woman-Asian_Woman 0.212724014 -0.3052324 0.7306804 0.9525641
## Wasian_Man-Asian_Woman 0.250529101 -0.2654017 0.7664599 0.8746048
## Wasian_Woman-Asian_Woman 0.122222222 -0.3999625 0.6444069 0.9992063
```

```
## White_Man-Asian_Woman      0.031226054 -0.4954410 0.5578931 1.0000000
## White_Woman-Asian_Woman    0.205555556 -0.3166291 0.7277402 0.9637523
## Black_Woman-Black_Man      0.222222222 -0.2999625 0.7444069 0.9409608
## Blight_Man-Black_Man       0.253439153 -0.2624916 0.7693699 0.8666967
## Blight_Woman-Black_Man     0.162724014 -0.3552324 0.6806804 0.9923509
## Wasian_Man-Black_Man       0.200529101 -0.3154017 0.7164599 0.9666134
## Wasian_Woman-Black_Man     0.072222222 -0.4499625 0.5944069 0.9999904
## White_Man-Black_Man        -0.018773946 -0.5454410 0.5078931 1.0000000
## White_Woman-Black_Man      0.155555556 -0.3666291 0.6777402 0.9948352
## Blight_Man-Black_Woman     0.031216931 -0.4847138 0.5471477 1.0000000
## Blight_Woman-Black_Woman   -0.059498208 -0.5774546 0.4584582 0.9999981
## Wasian_Man-Black_Woman     -0.021693122 -0.5376239 0.4942376 1.0000000
## Wasian_Woman-Black_Woman   -0.150000000 -0.6721847 0.3721847 0.9960703
## White_Man-Black_Woman      -0.240996169 -0.7676632 0.2856709 0.9095806
## White_Woman-Black_Woman    -0.066666667 -0.5888514 0.4555180 0.9999952
## Blight_Woman-Blight_Man    -0.090715139 -0.6023659 0.4209357 0.9999197
## Wasian_Man-Blight_Man      -0.052910053 -0.5625101 0.4566900 0.9999992
## Wasian_Woman-Blight_Man    -0.181216931 -0.6971477 0.3347138 0.9830819
## White_Man-Blight_Man       -0.272213100 -0.7926801 0.2482539 0.8168834
## White_Woman-Blight_Man     -0.097883598 -0.6138144 0.4180472 0.9998582
## Wasian_Man-Blight_Woman     0.037805086 -0.4738457 0.5494559 1.0000000
## Wasian_Woman-Blight_Woman  -0.090501792 -0.6084582 0.4274546 0.9999290
## White_Man-Blight_Woman     -0.181497961 -0.7039730 0.3409771 0.9843308
## White_Woman-Blight_Woman   -0.007168459 -0.5251249 0.5107879 1.0000000
## Wasian_Woman-Wasian_Man    -0.128306878 -0.6442376 0.3876239 0.9987132
## White_Man-Wasian_Man       -0.219303047 -0.7397700 0.3011639 0.9444254
## White_Woman-Wasian_Man     -0.044973545 -0.5609043 0.4709572 0.9999998
## White_Man-Wasian_Woman     -0.090996169 -0.6176632 0.4356709 0.9999354
## White_Woman-Wasian_Woman   0.083333333 -0.4388514 0.6055180 0.9999671
## White_Woman-White_Man      0.174329502 -0.3523375 0.7009965 0.9888495
```

```
H1_f <- aov(femininity ~ Group, data = new_df)
summary(H1_f)
```

```
##              Df Sum Sq Mean Sq F value Pr(>F)
## Group          9    9.2    1.024    0.979  0.456
## Residuals    598  625.5    1.046
```

```
TukeyHSD(H1_f)
```

```
##      Tukey multiple comparisons of means
##      95% family-wise confidence level
##
## Fit: aov(formula = femininity ~ Group, data = new_df)
##
## $Group
##              diff              lwr              upr              p adj
## Asian_Woman-Asian_Man 0.057258065 -0.5309347 0.6454509 0.9999996
## Black_Man-Asian_Man   0.232258065 -0.3559347 0.8204509 0.9630222
## Black_Woman-Asian_Man 0.307258065 -0.2809347 0.8954509 0.8179721
## Blight_Man-Asian_Man  0.314004096 -0.2670280 0.8950362 0.7860537
## Blight_Woman-Asian_Man 0.149193548 -0.4341581 0.7325452 0.9983955
## Wasian_Man-Asian_Man  0.202892985 -0.3781391 0.7839251 0.9837538
```

```
## Wasian_Woman-Asian_Man      0.078091398 -0.5101014 0.6662842 0.9999933
## White_Man-Asian_Man         -0.045328142 -0.6386523 0.5479960 0.9999999
## White_Woman-Asian_Man       0.007258065 -0.5809347 0.5954509 1.0000000
## Black_Man-Asian_Woman       0.175000000 -0.4179945 0.7679945 0.9951851
## Black_Woman-Asian_Woman     0.250000000 -0.3429945 0.8429945 0.9442390
## Blight_Man-Asian_Woman      0.256746032 -0.3291464 0.8426385 0.9296357
## Blight_Woman-Asian_Woman    0.091935484 -0.4962573 0.6801283 0.9999725
## Wasian_Man-Asian_Woman      0.145634921 -0.4402575 0.7315274 0.9987181
## Wasian_Woman-Asian_Woman    0.020833333 -0.5721611 0.6138278 1.0000000
## White_Man-Asian_Woman       -0.102586207 -0.7006708 0.4954984 0.9999393
## White_Woman-Asian_Woman     -0.050000000 -0.6429945 0.5429945 0.9999999
## Black_Woman-Black_Man       0.075000000 -0.5179945 0.6679945 0.9999956
## Blight_Man-Black_Man        0.081746032 -0.5041464 0.6676385 0.9999896
## Blight_Woman-Black_Man      -0.083064516 -0.6712573 0.5051283 0.9999885
## Wasian_Man-Black_Man        -0.029365079 -0.6152575 0.5565274 1.0000000
## Wasian_Woman-Black_Man      -0.154166667 -0.7471611 0.4388278 0.9981758
## White_Man-Black_Man         -0.277586207 -0.8756708 0.3204984 0.9020523
## White_Woman-Black_Man       -0.225000000 -0.8179945 0.3679945 0.9714845
## Blight_Man-Black_Woman      0.006746032 -0.5791464 0.5926385 1.0000000
## Blight_Woman-Black_Woman    -0.158064516 -0.7462573 0.4301283 0.9976404
## Wasian_Man-Black_Woman      -0.104365079 -0.6902575 0.4815274 0.9999165
## Wasian_Woman-Black_Woman    -0.229166667 -0.8221611 0.3638278 0.9678345
## White_Man-Black_Woman       -0.352586207 -0.9506708 0.2454984 0.6879779
## White_Woman-Black_Woman     -0.300000000 -0.8929945 0.2929945 0.8447821
## Blight_Woman-Blight_Man     -0.164810548 -0.7458427 0.4162216 0.9964289
## Wasian_Man-Blight_Man       -0.111111111 -0.6898144 0.4675922 0.9998434
## Wasian_Woman-Blight_Man     -0.235912698 -0.8218052 0.3499798 0.9581132
## White_Man-Blight_Man        -0.359332239 -0.9503760 0.2317116 0.6479924
## White_Woman-Blight_Man      -0.306746032 -0.8926385 0.2791464 0.8159692
## Wasian_Man-Blight_Woman     0.053699437 -0.5273327 0.6347316 0.9999997
## Wasian_Woman-Blight_Woman   -0.071102151 -0.6592950 0.5170906 0.9999970
## White_Man-Blight_Woman      -0.194521691 -0.7878459 0.3988025 0.9895871
## White_Woman-Blight_Woman    -0.141935484 -0.7301283 0.4462573 0.9989870
## Wasian_Woman-Wasian_Man     -0.124801587 -0.7106941 0.4610909 0.9996304
## White_Man-Wasian_Man        -0.248221128 -0.8392649 0.3428227 0.9455368
## White_Woman-Wasian_Man      -0.195634921 -0.7815274 0.3902575 0.9881344
## White_Man-Wasian_Woman      -0.123419540 -0.7215042 0.4746651 0.9997152
## White_Woman-Wasian_Woman    -0.070833333 -0.6638278 0.5221611 0.9999973
## White_Woman-White_Man       0.052586207 -0.5454984 0.6506708 0.9999998
```

```
H2 <- manova(cbind(masculinity, femininity) ~ Group, data = new_df)
summary(H2)
```

```
##           Df    Pillai approx F num Df den Df Pr(>F)
## Group      9 0.024753 0.83264      18   1196 0.6624
## Residuals 598
```

```
## masculinity & femininity ratings
H3_m <- aov(masculinity ~ Group, data = new_df)
summary(H3_m)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9      6.4  0.7061   0.871  0.551
## Residuals 598  485.0  0.8111
```

ANOVA indicates no difference among groups but still running Post-hoc
TukeyHSD(H3_m)

```
## Tukey multiple comparisons of means
## 95% family-wise confidence level
##
## Fit: aov(formula = masculinity ~ Group, data = new_df)
##
## $Group
```

| | diff | lwr | upr | p adj |
|---------------------------|--------------|------------|-----------|-----------|
| Asian_Woman-Asian_Man | -0.105197133 | -0.6231535 | 0.4127593 | 0.9997503 |
| Black_Man-Asian_Man | -0.055197133 | -0.5731535 | 0.4627593 | 0.9999990 |
| Black_Woman-Asian_Man | 0.167025090 | -0.3509313 | 0.6849815 | 0.9907555 |
| Blight_Man-Asian_Man | 0.198242021 | -0.3134088 | 0.7098928 | 0.9672886 |
| Blight_Woman-Asian_Man | 0.107526882 | -0.4061664 | 0.6212202 | 0.9996798 |
| Wasian_Man-Asian_Man | 0.145331968 | -0.3663188 | 0.6569828 | 0.9963911 |
| Wasian_Woman-Asian_Man | 0.017025090 | -0.5009313 | 0.5349815 | 1.0000000 |
| White_Man-Asian_Man | -0.073971079 | -0.5964461 | 0.4485040 | 0.9999882 |
| White_Woman-Asian_Man | 0.100358423 | -0.4175980 | 0.6183148 | 0.9998310 |
| Black_Man-Asian_Woman | 0.050000000 | -0.4721847 | 0.5721847 | 0.9999996 |
| Black_Woman-Asian_Woman | 0.272222222 | -0.2499625 | 0.7944069 | 0.8197701 |
| Blight_Man-Asian_Woman | 0.303439153 | -0.2124916 | 0.8193699 | 0.6909297 |
| Blight_Woman-Asian_Woman | 0.212724014 | -0.3052324 | 0.7306804 | 0.9525641 |
| Wasian_Man-Asian_Woman | 0.250529101 | -0.2654017 | 0.7664599 | 0.8746048 |
| Wasian_Woman-Asian_Woman | 0.122222222 | -0.3999625 | 0.6444069 | 0.9992063 |
| White_Man-Asian_Woman | 0.031226054 | -0.4954410 | 0.5578931 | 1.0000000 |
| White_Woman-Asian_Woman | 0.205555556 | -0.3166291 | 0.7277402 | 0.9637523 |
| Black_Woman-Black_Man | 0.222222222 | -0.2999625 | 0.7444069 | 0.9409608 |
| Blight_Man-Black_Man | 0.253439153 | -0.2624916 | 0.7693699 | 0.8666967 |
| Blight_Woman-Black_Man | 0.162724014 | -0.3552324 | 0.6806804 | 0.9923509 |
| Wasian_Man-Black_Man | 0.200529101 | -0.3154017 | 0.7164599 | 0.9666134 |
| Wasian_Woman-Black_Man | 0.072222222 | -0.4499625 | 0.5944069 | 0.9999904 |
| White_Man-Black_Man | -0.018773946 | -0.5454410 | 0.5078931 | 1.0000000 |
| White_Woman-Black_Man | 0.155555556 | -0.3666291 | 0.6777402 | 0.9948352 |
| Blight_Man-Black_Woman | 0.031216931 | -0.4847138 | 0.5471477 | 1.0000000 |
| Blight_Woman-Black_Woman | -0.059498208 | -0.5774546 | 0.4584582 | 0.9999981 |
| Wasian_Man-Black_Woman | -0.021693122 | -0.5376239 | 0.4942376 | 1.0000000 |
| Wasian_Woman-Black_Woman | -0.150000000 | -0.6721847 | 0.3721847 | 0.9960703 |
| White_Man-Black_Woman | -0.240996169 | -0.7676632 | 0.2856709 | 0.9095806 |
| White_Woman-Black_Woman | -0.066666667 | -0.5888514 | 0.4555180 | 0.9999952 |
| Blight_Woman-Blight_Man | -0.090715139 | -0.6023659 | 0.4209357 | 0.9999197 |
| Wasian_Man-Blight_Man | -0.052910053 | -0.5625101 | 0.4566900 | 0.9999992 |
| Wasian_Woman-Blight_Man | -0.181216931 | -0.6971477 | 0.3347138 | 0.9830819 |
| White_Man-Blight_Man | -0.272213100 | -0.7926801 | 0.2482539 | 0.8168834 |
| White_Woman-Blight_Man | -0.097883598 | -0.6138144 | 0.4180472 | 0.9998582 |
| Wasian_Man-Blight_Woman | 0.037805086 | -0.4738457 | 0.5494559 | 1.0000000 |
| Wasian_Woman-Blight_Woman | -0.090501792 | -0.6084582 | 0.4274546 | 0.9999290 |
| White_Man-Blight_Woman | -0.181497961 | -0.7039730 | 0.3409771 | 0.9843308 |
| White_Woman-Blight_Woman | -0.007168459 | -0.5251249 | 0.5107879 | 1.0000000 |
| Wasian_Woman-Wasian_Man | -0.128306878 | -0.6442376 | 0.3876239 | 0.9987132 |
| White_Man-Wasian_Man | -0.219303047 | -0.7397700 | 0.3011639 | 0.9444254 |
| White_Woman-Wasian_Man | -0.044973545 | -0.5609043 | 0.4709572 | 0.9999998 |
| White_Man-Wasian_Woman | -0.090996169 | -0.6176632 | 0.4356709 | 0.9999354 |

```
## White_Woman-Wasian_Woman    0.083333333 -0.4388514 0.6055180 0.9999671
## White_Woman-White_Man       0.174329502 -0.3523375 0.7009965 0.9888495
```

```
H3_f <- aov(femininity ~ Group, data = new_df)
summary(H3_f)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9      9.2    1.024    0.979  0.456
## Residuals 598    625.5    1.046
```

```
## total response time difference
total_response_time_anova <- aov(total_response_time ~ Group, data = new_df)
summary(total_response_time_anova)
```

```
##           Df  Sum Sq Mean Sq F value Pr(>F)
## Group      9   42185    4687    0.672  0.735
## Residuals 598 4172869    6978
```

```
## item-wise response time difference
item1_response_time_aonva <- aov(timing_leader ~ Group, data = new_df)
summary(item1_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   2412    268.0    1.244  0.265
## Residuals 598 128773    215.3
```

```
item2_response_time_aonva <- aov(timing_independent ~ Group, data = new_df)
summary(item2_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   1278    142.0    0.858  0.563
## Residuals 598  98953    165.5
```

```
item3_response_time_aonva <- aov(timing_ambitious ~ Group, data = new_df)
summary(item3_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   3377    375.3    1.036  0.41
## Residuals 598 216653    362.3
```

```
item4_response_time_aonva <- aov(timing_loyal ~ Group, data = new_df)
summary(item4_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   1060    117.74    1.186  0.301
## Residuals 598  59385    99.31
```

```
item5_response_time_aonva <- aov(timing_sensitive ~ Group, data = new_df)
summary(item5_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   18466     2052   0.794  0.622
## Residuals 598 1545113     2584
```

```
item6_response_time_aonva <- aov(timing_warm ~ Group, data = new_df)
summary(item6_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9     921    102.3   0.65  0.754
## Residuals 598  94059    157.3
```

```
item7_response_time_aonva <- aov(timing_compassionate ~ Group, data = new_df)
summary(item7_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9     287    31.87   0.332  0.964
## Residuals 598  57370    95.94
```

```
item8_response_time_aonva <- aov(timing_adaptable ~ Group, data = new_df)
summary(item8_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    1144   127.06   1.385  0.191
## Residuals 598  54874    91.76
```

```
item9_response_time_aonva <- aov(timing_sincere ~ Group, data = new_df)
summary(item9_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    2566   285.1   1.248  0.263
## Residuals 598 136662   228.5
```

```
item10_response_time_aonva <- aov(timing_reliable ~ Group, data = new_df)
summary(item10_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    1706   189.6   1.15  0.325
## Residuals 598  98551   164.8
```

```
item11_response_time_aonva <- aov(timing_truthful ~ Group, data = new_df)
summary(item11_response_time_aonva)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   13681   1520   1.493  0.147
## Residuals 598 608779   1018
```



```
# Hypothesis 3 was not supported
# H3a: No difference in masculinity or femininity rating among groups
# H3b: No difference in response time
```

```
modell1 <- lm(tot_res_time ~ Group * age * gender, data = lm_df)
summary(modell1)
```

```
##
## Call:
## lm(formula = tot_res_time ~ Group * age * gender, data = lm_df)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -90.82  -36.64  -19.45    5.06  1086.24
##
## Coefficients: (11 not defined because of singularities)
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    -228.17460    617.83430   -0.369   0.712
## GroupAsian_Woman -189.68405    247.26815   -0.767   0.443
## GroupBlack_Man    238.39493    699.08613    0.341   0.733
## GroupBlack_Woman   23.69264    92.01023    0.258   0.797
## GroupBlight_Man  -53.91671    96.34198   -0.560   0.576
## GroupBlight_Woman -110.77858    100.76255   -1.099   0.272
## GroupWasian_Man  -21.96129    106.73709   -0.206   0.837
## GroupWasian_Woman -147.39958    126.41987   -1.166   0.244
## GroupWhite_Man    454.53960   3610.46192    0.126   0.900
## GroupWhite_Woman -101.25607    162.24079   -0.624   0.533
## age              12.77420     24.11319    0.530   0.596
## genderFemale     266.57368    624.26531    0.427   0.670
## genderMale       360.71229    621.77393    0.580   0.562
## GroupAsian_Woman:age  0.42450     2.66821    0.159   0.874
## GroupBlack_Man:age  -11.86287     26.12262   -0.454   0.650
## GroupBlack_Woman:age -0.02053     2.44228   -0.008   0.993
## GroupBlight_Man:age  1.20012     2.59470    0.463   0.644
## GroupBlight_Woman:age  2.73180     2.73878    0.997   0.319
## GroupWasian_Man:age  0.34597     2.89097    0.120   0.905
## GroupWasian_Woman:age  3.65373     2.80984    1.300   0.194
## GroupWhite_Man:age  -18.93720    122.95362   -0.154   0.878
## GroupWhite_Woman:age  0.61413     3.14101    0.196   0.845
## GroupAsian_Woman:genderFemale 201.99213    273.26197    0.739   0.460
## GroupBlack_Man:genderFemale -247.57621    708.60070   -0.349   0.727
## GroupBlack_Woman:genderFemale  62.52062    163.13934    0.383   0.702
## GroupBlight_Man:genderFemale 194.35878    162.72149    1.194   0.233
## GroupBlight_Woman:genderFemale 103.36874    154.41338    0.669   0.503
## GroupWasian_Man:genderFemale 121.56517    156.95500    0.775   0.439
## GroupWasian_Woman:genderFemale 137.57728    179.21289    0.768   0.443
## GroupWhite_Man:genderFemale -424.22992   3612.72911   -0.117   0.907
## GroupWhite_Woman:genderFemale 122.35983    195.29392    0.627   0.531
## GroupAsian_Woman:genderMale 169.23578    230.92764    0.733   0.464
## GroupBlack_Man:genderMale -294.50250    706.33349   -0.417   0.677
## GroupBlack_Woman:genderMale      NA         NA      NA      NA
## GroupBlight_Man:genderMale      NA         NA      NA      NA
## GroupBlight_Woman:genderMale      NA         NA      NA      NA
```



```
## GroupWasian_Man:genderMale      NA      NA      NA      NA
## GroupWasian_Woman:genderMale    10.61597 111.67923 0.095 0.924
## GroupWhite_Man:genderMale      -557.77637 3611.75209 -0.154 0.877
## GroupWhite_Woman:genderMale     67.61697 137.18251 0.493 0.622
## age:genderFemale               -11.83271 24.20627 -0.489 0.625
## age:genderMale                 -14.12614 24.18889 -0.584 0.559
## GroupAsian_Woman:age:genderFemale -0.66190 3.87512 -0.171 0.864
## GroupBlack_Man:age:genderFemale  11.96927 26.27703 0.456 0.649
## GroupBlack_Woman:age:genderFemale -1.67830 4.17822 -0.402 0.688
## GroupBlight_Man:age:genderFemale -4.88895 4.28335 -1.141 0.254
## GroupBlight_Woman:age:genderFemale -2.49189 3.99392 -0.624 0.533
## GroupWasian_Man:age:genderFemale -2.18368 4.01046 -0.544 0.586
## GroupWasian_Woman:age:genderFemale -3.34495 4.23585 -0.790 0.430
## GroupWhite_Man:age:genderFemale  18.57878 122.99275 0.151 0.880
## GroupWhite_Woman:age:genderFemale -0.62857 4.07703 -0.154 0.878
## GroupAsian_Woman:age:genderMale   NA      NA      NA      NA
## GroupBlack_Man:age:genderMale    13.76168 26.26355 0.524 0.600
## GroupBlack_Woman:age:genderMale   NA      NA      NA      NA
## GroupBlight_Man:age:genderMale    NA      NA      NA      NA
## GroupBlight_Woman:age:genderMale  NA      NA      NA      NA
## GroupWasian_Man:age:genderMale    NA      NA      NA      NA
## GroupWasian_Woman:age:genderMale  NA      NA      NA      NA
## GroupWhite_Man:age:genderMale    22.16538 122.98097 0.180 0.857
## GroupWhite_Woman:age:genderMale   NA      NA      NA      NA
##
## Residual standard error: 85.25 on 559 degrees of freedom
## Multiple R-squared: 0.03611, Adjusted R-squared: -0.04666
## F-statistic: 0.4363 on 48 and 559 DF, p-value: 0.9997
```

```
model2 <- lm(tot_res_time ~ Group * eth * emp_st, data = lm_df)
summary(model2)
```

```
##
## Call:
## lm(formula = tot_res_time ~ Group * eth * emp_st, data = lm_df)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -153.68  -32.59  -15.81    6.68  1098.32
##
## Coefficients: (112 not defined because of singularities)
##
## (Intercept)                                Estimate
## GroupAsian_Woman                            75.042
## GroupBlack_Man                             130.440
## GroupBlack_Woman                           282.407
## GroupBlight_Man                            -13.821
## GroupBlight_Woman                           25.178
## GroupWasian_Man                             69.224
## GroupWasian_Woman                             1.989
## GroupWhite_Man                             15.503
## GroupWhite_Woman                           -21.239
## ethAsian                                   -27.961
## ethCaucasian                                1.483
```

| | |
|---|----------|
| ## ethLatino | 8.690 |
| ## ethNative American | -40.543 |
| ## ethOther (including identifying as multiple) | -6.146 |
| ## emp_stEmployed part-time | 20.769 |
| ## emp_stSelf-employed | -344.776 |
| ## GroupAsian_Woman:ethAsian | -87.026 |
| ## GroupBlack_Man:ethAsian | -131.331 |
| ## GroupBlack_Woman:ethAsian | -282.179 |
| ## GroupBlight_Man:ethAsian | 20.396 |
| ## GroupBlight_Woman:ethAsian | -16.802 |
| ## GroupWasian_Man:ethAsian | -67.299 |
| ## GroupWasian_Woman:ethAsian | 1.960 |
| ## GroupWhite_Man:ethAsian | -11.777 |
| ## GroupWhite_Woman:ethAsian | 95.888 |
| ## GroupAsian_Woman:ethCaucasian | -93.819 |
| ## GroupBlack_Man:ethCaucasian | -149.290 |
| ## GroupBlack_Woman:ethCaucasian | -282.808 |
| ## GroupBlight_Man:ethCaucasian | 7.155 |
| ## GroupBlight_Woman:ethCaucasian | -40.936 |
| ## GroupWasian_Man:ethCaucasian | -77.531 |
| ## GroupWasian_Woman:ethCaucasian | -6.458 |
| ## GroupWhite_Man:ethCaucasian | -6.567 |
| ## GroupWhite_Woman:ethCaucasian | 19.396 |
| ## GroupAsian_Woman:ethLatino | -74.571 |
| ## GroupBlack_Man:ethLatino | -157.437 |
| ## GroupBlack_Woman:ethLatino | -296.733 |
| ## GroupBlight_Man:ethLatino | -2.740 |
| ## GroupBlight_Woman:ethLatino | -18.637 |
| ## GroupWasian_Man:ethLatino | -102.138 |
| ## GroupWasian_Woman:ethLatino | -24.295 |
| ## GroupWhite_Man:ethLatino | 52.410 |
| ## GroupWhite_Woman:ethLatino | 34.852 |
| ## GroupAsian_Woman:ethNative American | NA |
| ## GroupBlack_Man:ethNative American | -69.372 |
| ## GroupBlack_Woman:ethNative American | 95.158 |
| ## GroupBlight_Man:ethNative American | NA |
| ## GroupBlight_Woman:ethNative American | NA |
| ## GroupWasian_Man:ethNative American | NA |
| ## GroupWasian_Woman:ethNative American | NA |
| ## GroupWhite_Man:ethNative American | NA |
| ## GroupWhite_Woman:ethNative American | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple) | -83.160 |
| ## GroupBlack_Man:ethOther (including identifying as multiple) | -134.895 |
| ## GroupBlack_Woman:ethOther (including identifying as multiple) | -318.018 |
| ## GroupBlight_Man:ethOther (including identifying as multiple) | 70.156 |
| ## GroupBlight_Woman:ethOther (including identifying as multiple) | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple) | -11.189 |
| ## GroupWasian_Woman:ethOther (including identifying as multiple) | -32.678 |
| ## GroupWhite_Man:ethOther (including identifying as multiple) | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple) | 17.132 |
| ## GroupAsian_Woman:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:emp_stEmployed part-time | NA |

| | |
|--|---------|
| ## GroupBlight_Woman:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:emp_stSelf-employed | 62.782 |
| ## GroupBlack_Man:emp_stSelf-employed | 210.224 |
| ## GroupBlack_Woman:emp_stSelf-employed | 35.803 |
| ## GroupBlight_Man:emp_stSelf-employed | -43.853 |
| ## GroupBlight_Woman:emp_stSelf-employed | 33.381 |
| ## GroupWasian_Man:emp_stSelf-employed | -1.865 |
| ## GroupWasian_Woman:emp_stSelf-employed | 22.917 |
| ## GroupWhite_Man:emp_stSelf-employed | 338.981 |
| ## GroupWhite_Woman:emp_stSelf-employed | 9.474 |
| ## ethAsian:emp_stEmployed part-time | NA |
| ## ethCaucasian:emp_stEmployed part-time | NA |
| ## ethLatino:emp_stEmployed part-time | NA |
| ## ethNative American:emp_stEmployed part-time | NA |
| ## ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## ethAsian:emp_stSelf-employed | 305.612 |
| ## ethCaucasian:emp_stSelf-employed | 329.112 |
| ## ethLatino:emp_stSelf-employed | 275.826 |
| ## ethNative American:emp_stSelf-employed | NA |
| ## ethOther (including identifying as multiple):emp_stSelf-employed | 332.090 |
| ## GroupAsian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethNative American:emp_stEmployed part-time | NA |

| | |
|--|----------|
| ## GroupBlight_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stSelf-employed | -186.677 |
| ## GroupBlack_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stSelf-employed | 15.649 |
| ## GroupBlight_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |

| | |
|---|------------|
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## | Std. Error |
| ## (Intercept) | 40.755 |
| ## GroupAsian_Woman | 51.090 |
| ## GroupBlack_Man | 52.615 |
| ## GroupBlack_Woman | 57.637 |
| ## GroupBlight_Man | 62.255 |
| ## GroupBlight_Woman | 54.679 |
| ## GroupWasian_Man | 48.223 |
| ## GroupWasian_Woman | 62.255 |
| ## GroupWhite_Man | 51.090 |
| ## GroupWhite_Woman | 52.615 |
| ## ethAsian | 62.255 |
| ## ethCaucasian | 42.568 |
| ## ethLatino | 54.679 |
| ## ethNative American | 91.132 |
| ## ethOther (including identifying as multiple) | 70.591 |
| ## emp_stEmployed part-time | 82.392 |
| ## emp_stSelf-employed | 123.482 |
| ## GroupAsian_Woman:ethAsian | 90.260 |
| ## GroupBlack_Man:ethAsian | 84.839 |
| ## GroupBlack_Woman:ethAsian | 94.121 |
| ## GroupBlight_Man:ethAsian | 86.135 |
| ## GroupBlight_Woman:ethAsian | 79.447 |
| ## GroupWasian_Man:ethAsian | 76.609 |
| ## GroupWasian_Woman:ethAsian | 88.042 |
| ## GroupWhite_Man:ethAsian | 90.260 |
| ## GroupWhite_Woman:ethAsian | 81.511 |
| ## GroupAsian_Woman:ethCaucasian | 53.904 |
| ## GroupBlack_Man:ethCaucasian | 55.760 |
| ## GroupBlack_Woman:ethCaucasian | 60.172 |
| ## GroupBlight_Man:ethCaucasian | 64.538 |
| ## GroupBlight_Woman:ethCaucasian | 57.265 |
| ## GroupWasian_Man:ethCaucasian | 51.258 |
| ## GroupWasian_Woman:ethCaucasian | 64.785 |
| ## GroupWhite_Man:ethCaucasian | 53.904 |
| ## GroupWhite_Woman:ethCaucasian | 55.547 |
| ## GroupAsian_Woman:ethLatino | 102.874 |
| ## GroupBlack_Man:ethLatino | 75.883 |
| ## GroupBlack_Woman:ethLatino | 82.858 |
| ## GroupBlight_Man:ethLatino | 86.135 |
| ## GroupBlight_Woman:ethLatino | 104.703 |
| ## GroupWasian_Man:ethLatino | 101.480 |
| ## GroupWasian_Woman:ethLatino | 77.685 |
| ## GroupWhite_Man:ethLatino | 102.874 |
| ## GroupWhite_Woman:ethLatino | 73.661 |
| ## GroupAsian_Woman:ethNative American | NA |
| ## GroupBlack_Man:ethNative American | 126.714 |
| ## GroupBlack_Woman:ethNative American | 146.946 |

| | |
|--|---------|
| ## GroupBlight_Man:ethNative American | NA |
| ## GroupBlight_Woman:ethNative American | NA |
| ## GroupWasian_Man:ethNative American | NA |
| ## GroupWasian_Woman:ethNative American | NA |
| ## GroupWhite_Man:ethNative American | NA |
| ## GroupWhite_Woman:ethNative American | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple) | 96.199 |
| ## GroupBlack_Man:ethOther (including identifying as multiple) | 112.847 |
| ## GroupBlack_Woman:ethOther (including identifying as multiple) | 115.274 |
| ## GroupBlight_Man:ethOther (including identifying as multiple) | 117.651 |
| ## GroupBlight_Woman:ethOther (including identifying as multiple) | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple) | 110.867 |
| ## GroupWasian_Woman:ethOther (including identifying as multiple) | 117.651 |
| ## GroupWhite_Man:ethOther (including identifying as multiple) | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple) | 88.042 |
| ## GroupAsian_Woman:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:emp_stSelf-employed | 101.299 |
| ## GroupBlack_Man:emp_stSelf-employed | 151.655 |
| ## GroupBlack_Woman:emp_stSelf-employed | 83.323 |
| ## GroupBlight_Man:emp_stSelf-employed | 152.493 |
| ## GroupBlight_Woman:emp_stSelf-employed | 83.267 |
| ## GroupWasian_Man:emp_stSelf-employed | 83.343 |
| ## GroupWasian_Woman:emp_stSelf-employed | 70.514 |
| ## GroupWhite_Man:emp_stSelf-employed | 151.132 |
| ## GroupWhite_Woman:emp_stSelf-employed | 101.406 |
| ## ethAsian:emp_stEmployed part-time | NA |
| ## ethCaucasian:emp_stEmployed part-time | NA |
| ## ethLatino:emp_stEmployed part-time | NA |
| ## ethNative American:emp_stEmployed part-time | NA |
| ## ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## ethAsian:emp_stSelf-employed | 168.906 |
| ## ethCaucasian:emp_stSelf-employed | 108.511 |
| ## ethLatino:emp_stSelf-employed | 131.010 |
| ## ethNative American:emp_stSelf-employed | NA |
| ## ethOther (including identifying as multiple):emp_stSelf-employed | 158.788 |
| ## GroupAsian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stEmployed part-time | NA |

| | |
|--|---------|
| ## GroupBlack_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stSelf-employed | 143.018 |
| ## GroupBlack_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stSelf-employed | 173.746 |
| ## GroupBlight_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethLatino:emp_stSelf-employed | NA |

| | |
|---|---------|
| ## GroupBlack_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## | t value |
| ## (Intercept) | 2.054 |
| ## GroupAsian_Woman | 1.469 |
| ## GroupBlack_Man | 2.479 |
| ## GroupBlack_Woman | 4.900 |
| ## GroupBlight_Man | -0.222 |
| ## GroupBlight_Woman | 0.460 |
| ## GroupWasian_Man | 1.436 |
| ## GroupWasian_Woman | 0.032 |
| ## GroupWhite_Man | 0.303 |
| ## GroupWhite_Woman | -0.404 |
| ## ethAsian | -0.449 |
| ## ethCaucasian | 0.035 |
| ## ethLatino | 0.159 |
| ## ethNative American | -0.445 |
| ## ethOther (including identifying as multiple) | -0.087 |
| ## emp_stEmployed part-time | 0.252 |
| ## emp_stSelf-employed | -2.792 |
| ## GroupAsian_Woman:ethAsian | -0.964 |
| ## GroupBlack_Man:ethAsian | -1.548 |
| ## GroupBlack_Woman:ethAsian | -2.998 |
| ## GroupBlight_Man:ethAsian | 0.237 |
| ## GroupBlight_Woman:ethAsian | -0.211 |
| ## GroupWasian_Man:ethAsian | -0.878 |
| ## GroupWasian_Woman:ethAsian | 0.022 |
| ## GroupWhite_Man:ethAsian | -0.130 |
| ## GroupWhite_Woman:ethAsian | 1.176 |
| ## GroupAsian_Woman:ethCaucasian | -1.740 |
| ## GroupBlack_Man:ethCaucasian | -2.677 |

| | |
|---|--------|
| ## GroupBlack_Woman:ethCaucasian | -4.700 |
| ## GroupBlight_Man:ethCaucasian | 0.111 |
| ## GroupBlight_Woman:ethCaucasian | -0.715 |
| ## GroupWasian_Man:ethCaucasian | -1.513 |
| ## GroupWasian_Woman:ethCaucasian | -0.100 |
| ## GroupWhite_Man:ethCaucasian | -0.122 |
| ## GroupWhite_Woman:ethCaucasian | 0.349 |
| ## GroupAsian_Woman:ethLatino | -0.725 |
| ## GroupBlack_Man:ethLatino | -2.075 |
| ## GroupBlack_Woman:ethLatino | -3.581 |
| ## GroupBlight_Man:ethLatino | -0.032 |
| ## GroupBlight_Woman:ethLatino | -0.178 |
| ## GroupWasian_Man:ethLatino | -1.006 |
| ## GroupWasian_Woman:ethLatino | -0.313 |
| ## GroupWhite_Man:ethLatino | 0.509 |
| ## GroupWhite_Woman:ethLatino | 0.473 |
| ## GroupAsian_Woman:ethNative American | NA |
| ## GroupBlack_Man:ethNative American | -0.547 |
| ## GroupBlack_Woman:ethNative American | 0.648 |
| ## GroupBlight_Man:ethNative American | NA |
| ## GroupBlight_Woman:ethNative American | NA |
| ## GroupWasian_Man:ethNative American | NA |
| ## GroupWasian_Woman:ethNative American | NA |
| ## GroupWhite_Man:ethNative American | NA |
| ## GroupWhite_Woman:ethNative American | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple) | -0.864 |
| ## GroupBlack_Man:ethOther (including identifying as multiple) | -1.195 |
| ## GroupBlack_Woman:ethOther (including identifying as multiple) | -2.759 |
| ## GroupBlight_Man:ethOther (including identifying as multiple) | 0.596 |
| ## GroupBlight_Woman:ethOther (including identifying as multiple) | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple) | -0.101 |
| ## GroupWasian_Woman:ethOther (including identifying as multiple) | -0.278 |
| ## GroupWhite_Man:ethOther (including identifying as multiple) | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple) | 0.195 |
| ## GroupAsian_Woman:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:emp_stSelf-employed | 0.620 |
| ## GroupBlack_Man:emp_stSelf-employed | 1.386 |
| ## GroupBlack_Woman:emp_stSelf-employed | 0.430 |
| ## GroupBlight_Man:emp_stSelf-employed | -0.288 |
| ## GroupBlight_Woman:emp_stSelf-employed | 0.401 |
| ## GroupWasian_Man:emp_stSelf-employed | -0.022 |
| ## GroupWasian_Woman:emp_stSelf-employed | 0.325 |
| ## GroupWhite_Man:emp_stSelf-employed | 2.243 |
| ## GroupWhite_Woman:emp_stSelf-employed | 0.093 |
| ## ethAsian:emp_stEmployed part-time | NA |
| ## ethCaucasian:emp_stEmployed part-time | NA |

| | |
|--|-------|
| ## ethLatino:emp_stEmployed part-time | NA |
| ## ethNative American:emp_stEmployed part-time | NA |
| ## ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## ethAsian:emp_stSelf-employed | 1.809 |
| ## ethCaucasian:emp_stSelf-employed | 3.033 |
| ## ethLatino:emp_stSelf-employed | 2.105 |
| ## ethNative American:emp_stSelf-employed | NA |
| ## ethOther (including identifying as multiple):emp_stSelf-employed | 2.091 |
| ## GroupAsian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethAsian:emp_stSelf-employed | NA |

| | |
|---|----------|
| ## GroupBlack_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stSelf-employed | -1.305 |
| ## GroupBlack_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stSelf-employed | 0.090 |
| ## GroupBlight_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## | Pr(> t) |
| ## (Intercept) | 0.040420 |
| ## GroupAsian_Woman | 0.142462 |
| ## GroupBlack_Man | 0.013474 |
| ## GroupBlack_Woman | 1.27e-06 |
| ## GroupBlight_Man | 0.824394 |
| ## GroupBlight_Woman | 0.645369 |
| ## GroupWasian_Man | 0.151720 |
| ## GroupWasian_Woman | 0.974528 |
| ## GroupWhite_Man | 0.761664 |

| | |
|---|----------|
| ## GroupWhite_Woman | 0.686623 |
| ## ethAsian | 0.653518 |
| ## ethCaucasian | 0.972230 |
| ## ethLatino | 0.873792 |
| ## ethNative American | 0.656581 |
| ## ethOther (including identifying as multiple) | 0.930649 |
| ## emp_stEmployed part-time | 0.801075 |
| ## emp_stSelf-employed | 0.005422 |
| ## GroupAsian_Woman:ethAsian | 0.335394 |
| ## GroupBlack_Man:ethAsian | 0.122210 |
| ## GroupBlack_Woman:ethAsian | 0.002842 |
| ## GroupBlight_Man:ethAsian | 0.812904 |
| ## GroupBlight_Woman:ethAsian | 0.832585 |
| ## GroupWasian_Man:ethAsian | 0.380079 |
| ## GroupWasian_Woman:ethAsian | 0.982246 |
| ## GroupWhite_Man:ethAsian | 0.896238 |
| ## GroupWhite_Woman:ethAsian | 0.239959 |
| ## GroupAsian_Woman:ethCaucasian | 0.082342 |
| ## GroupBlack_Man:ethCaucasian | 0.007646 |
| ## GroupBlack_Woman:ethCaucasian | 3.31e-06 |
| ## GroupBlight_Man:ethCaucasian | 0.911766 |
| ## GroupBlight_Woman:ethCaucasian | 0.475005 |
| ## GroupWasian_Man:ethCaucasian | 0.130977 |
| ## GroupWasian_Woman:ethCaucasian | 0.920637 |
| ## GroupWhite_Man:ethCaucasian | 0.903074 |
| ## GroupWhite_Woman:ethCaucasian | 0.727083 |
| ## GroupAsian_Woman:ethLatino | 0.468842 |
| ## GroupBlack_Man:ethLatino | 0.038483 |
| ## GroupBlack_Woman:ethLatino | 0.000373 |
| ## GroupBlight_Man:ethLatino | 0.974633 |
| ## GroupBlight_Woman:ethLatino | 0.858794 |
| ## GroupWasian_Man:ethLatino | 0.314636 |
| ## GroupWasian_Woman:ethLatino | 0.754598 |
| ## GroupWhite_Man:ethLatino | 0.610638 |
| ## GroupWhite_Woman:ethLatino | 0.636309 |
| ## GroupAsian_Woman:ethNative American | NA |
| ## GroupBlack_Man:ethNative American | 0.584281 |
| ## GroupBlack_Woman:ethNative American | 0.517536 |
| ## GroupBlight_Man:ethNative American | NA |
| ## GroupBlight_Woman:ethNative American | NA |
| ## GroupWasian_Man:ethNative American | NA |
| ## GroupWasian_Woman:ethNative American | NA |
| ## GroupWhite_Man:ethNative American | NA |
| ## GroupWhite_Woman:ethNative American | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple) | 0.387719 |
| ## GroupBlack_Man:ethOther (including identifying as multiple) | 0.232462 |
| ## GroupBlack_Woman:ethOther (including identifying as multiple) | 0.005998 |
| ## GroupBlight_Man:ethOther (including identifying as multiple) | 0.551221 |
| ## GroupBlight_Woman:ethOther (including identifying as multiple) | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple) | 0.919649 |
| ## GroupWasian_Woman:ethOther (including identifying as multiple) | 0.781309 |
| ## GroupWhite_Man:ethOther (including identifying as multiple) | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple) | 0.845791 |
| ## GroupAsian_Woman:emp_stEmployed part-time | NA |

| | |
|--|----------|
| ## GroupBlack_Man:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:emp_stSelf-employed | 0.535669 |
| ## GroupBlack_Man:emp_stSelf-employed | 0.166258 |
| ## GroupBlack_Woman:emp_stSelf-employed | 0.667595 |
| ## GroupBlight_Man:emp_stSelf-employed | 0.773783 |
| ## GroupBlight_Woman:emp_stSelf-employed | 0.688657 |
| ## GroupWasian_Man:emp_stSelf-employed | 0.982156 |
| ## GroupWasian_Woman:emp_stSelf-employed | 0.745307 |
| ## GroupWhite_Man:emp_stSelf-employed | 0.025305 |
| ## GroupWhite_Woman:emp_stSelf-employed | 0.925602 |
| ## ethAsian:emp_stEmployed part-time | NA |
| ## ethCaucasian:emp_stEmployed part-time | NA |
| ## ethLatino:emp_stEmployed part-time | NA |
| ## ethNative American:emp_stEmployed part-time | NA |
| ## ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## ethAsian:emp_stSelf-employed | 0.070951 |
| ## ethCaucasian:emp_stSelf-employed | 0.002538 |
| ## ethLatino:emp_stSelf-employed | 0.035720 |
| ## ethNative American:emp_stSelf-employed | NA |
| ## ethOther (including identifying as multiple):emp_stSelf-employed | 0.036959 |
| ## GroupAsian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethAsian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethAsian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethLatino:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethLatino:emp_stEmployed part-time | NA |

| | |
|--|----------|
| ## GroupAsian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethNative American:emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethNative American:emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time | NA |
| ## GroupAsian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethAsian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethAsian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethCaucasian:emp_stSelf-employed | 0.192357 |
| ## GroupBlack_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethCaucasian:emp_stSelf-employed | 0.928268 |
| ## GroupBlight_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethCaucasian:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethLatino:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethLatino:emp_stSelf-employed | NA |
| ## GroupAsian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethNative American:emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethNative American:emp_stSelf-employed | NA |

| | |
|---|-----|
| ## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Man:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stSelf-employed | NA |
| ## | |
| ## (Intercept) | * |
| ## GroupAsian_Woman | |
| ## GroupBlack_Man | * |
| ## GroupBlack_Woman | *** |
| ## GroupBlight_Man | |
| ## GroupBlight_Woman | |
| ## GroupWasian_Man | |
| ## GroupWasian_Woman | |
| ## GroupWhite_Man | |
| ## GroupWhite_Woman | |
| ## ethAsian | |
| ## ethCaucasian | |
| ## ethLatino | |
| ## ethNative American | |
| ## ethOther (including identifying as multiple) | |
| ## emp_stEmployed part-time | |
| ## emp_stSelf-employed | ** |
| ## GroupAsian_Woman:ethAsian | |
| ## GroupBlack_Man:ethAsian | |
| ## GroupBlack_Woman:ethAsian | ** |
| ## GroupBlight_Man:ethAsian | |
| ## GroupBlight_Woman:ethAsian | |
| ## GroupWasian_Man:ethAsian | |
| ## GroupWasian_Woman:ethAsian | |
| ## GroupWhite_Man:ethAsian | |
| ## GroupWhite_Woman:ethAsian | |
| ## GroupAsian_Woman:ethCaucasian | . |
| ## GroupBlack_Man:ethCaucasian | ** |
| ## GroupBlack_Woman:ethCaucasian | *** |
| ## GroupBlight_Man:ethCaucasian | |
| ## GroupBlight_Woman:ethCaucasian | |
| ## GroupWasian_Man:ethCaucasian | |
| ## GroupWasian_Woman:ethCaucasian | |
| ## GroupWhite_Man:ethCaucasian | |
| ## GroupWhite_Woman:ethCaucasian | |
| ## GroupAsian_Woman:ethLatino | |
| ## GroupBlack_Man:ethLatino | * |
| ## GroupBlack_Woman:ethLatino | *** |
| ## GroupBlight_Man:ethLatino | |
| ## GroupBlight_Woman:ethLatino | |
| ## GroupWasian_Man:ethLatino | |
| ## GroupWasian_Woman:ethLatino | |
| ## GroupWhite_Man:ethLatino | |
| ## GroupWhite_Woman:ethLatino | |

```

## GroupAsian_Woman:ethNative American
## GroupBlack_Man:ethNative American
## GroupBlack_Woman:ethNative American
## GroupBlight_Man:ethNative American
## GroupBlight_Woman:ethNative American
## GroupWasian_Man:ethNative American
## GroupWasian_Woman:ethNative American
## GroupWhite_Man:ethNative American
## GroupWhite_Woman:ethNative American
## GroupAsian_Woman:ethOther (including identifying as multiple)
## GroupBlack_Man:ethOther (including identifying as multiple)
## GroupBlack_Woman:ethOther (including identifying as multiple)
## GroupBlight_Man:ethOther (including identifying as multiple)
## GroupBlight_Woman:ethOther (including identifying as multiple)
## GroupWasian_Man:ethOther (including identifying as multiple)
## GroupWasian_Woman:ethOther (including identifying as multiple)
## GroupWhite_Man:ethOther (including identifying as multiple)
## GroupWhite_Woman:ethOther (including identifying as multiple)
## GroupAsian_Woman:emp_stEmployed part-time
## GroupBlack_Man:emp_stEmployed part-time
## GroupBlack_Woman:emp_stEmployed part-time
## GroupBlight_Man:emp_stEmployed part-time
## GroupBlight_Woman:emp_stEmployed part-time
## GroupWasian_Man:emp_stEmployed part-time
## GroupWasian_Woman:emp_stEmployed part-time
## GroupWhite_Man:emp_stEmployed part-time
## GroupWhite_Woman:emp_stEmployed part-time
## GroupAsian_Woman:emp_stSelf-employed
## GroupBlack_Man:emp_stSelf-employed
## GroupBlack_Woman:emp_stSelf-employed
## GroupBlight_Man:emp_stSelf-employed
## GroupBlight_Woman:emp_stSelf-employed
## GroupWasian_Man:emp_stSelf-employed
## GroupWasian_Woman:emp_stSelf-employed
## GroupWhite_Man:emp_stSelf-employed
## GroupWhite_Woman:emp_stSelf-employed
## ethAsian:emp_stEmployed part-time
## ethCaucasian:emp_stEmployed part-time
## ethLatino:emp_stEmployed part-time
## ethNative American:emp_stEmployed part-time
## ethOther (including identifying as multiple):emp_stEmployed part-time
## ethAsian:emp_stSelf-employed
## ethCaucasian:emp_stSelf-employed
## ethLatino:emp_stSelf-employed
## ethNative American:emp_stSelf-employed
## ethOther (including identifying as multiple):emp_stSelf-employed
## GroupAsian_Woman:ethAsian:emp_stEmployed part-time
## GroupBlack_Man:ethAsian:emp_stEmployed part-time
## GroupBlack_Woman:ethAsian:emp_stEmployed part-time
## GroupBlight_Man:ethAsian:emp_stEmployed part-time
## GroupBlight_Woman:ethAsian:emp_stEmployed part-time
## GroupWasian_Man:ethAsian:emp_stEmployed part-time
## GroupWasian_Woman:ethAsian:emp_stEmployed part-time
## GroupWhite_Man:ethAsian:emp_stEmployed part-time

```



```

## GroupWhite_Woman:ethAsian:emp_stEmployed part-time
## GroupAsian_Woman:ethCaucasian:emp_stEmployed part-time
## GroupBlack_Man:ethCaucasian:emp_stEmployed part-time
## GroupBlack_Woman:ethCaucasian:emp_stEmployed part-time
## GroupBlight_Man:ethCaucasian:emp_stEmployed part-time
## GroupBlight_Woman:ethCaucasian:emp_stEmployed part-time
## GroupWasian_Man:ethCaucasian:emp_stEmployed part-time
## GroupWasian_Woman:ethCaucasian:emp_stEmployed part-time
## GroupWhite_Man:ethCaucasian:emp_stEmployed part-time
## GroupWhite_Woman:ethCaucasian:emp_stEmployed part-time
## GroupAsian_Woman:ethLatino:emp_stEmployed part-time
## GroupBlack_Man:ethLatino:emp_stEmployed part-time
## GroupBlack_Woman:ethLatino:emp_stEmployed part-time
## GroupBlight_Man:ethLatino:emp_stEmployed part-time
## GroupBlight_Woman:ethLatino:emp_stEmployed part-time
## GroupWasian_Man:ethLatino:emp_stEmployed part-time
## GroupWasian_Woman:ethLatino:emp_stEmployed part-time
## GroupWhite_Man:ethLatino:emp_stEmployed part-time
## GroupWhite_Woman:ethLatino:emp_stEmployed part-time
## GroupAsian_Woman:ethNative American:emp_stEmployed part-time
## GroupBlack_Man:ethNative American:emp_stEmployed part-time
## GroupBlack_Woman:ethNative American:emp_stEmployed part-time
## GroupBlight_Man:ethNative American:emp_stEmployed part-time
## GroupBlight_Woman:ethNative American:emp_stEmployed part-time
## GroupWasian_Man:ethNative American:emp_stEmployed part-time
## GroupWasian_Woman:ethNative American:emp_stEmployed part-time
## GroupWhite_Man:ethNative American:emp_stEmployed part-time
## GroupWhite_Woman:ethNative American:emp_stEmployed part-time
## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupBlack_Man:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupBlight_Man:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupWasian_Man:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupWhite_Man:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stEmployed part-time
## GroupAsian_Woman:ethAsian:emp_stSelf-employed
## GroupBlack_Man:ethAsian:emp_stSelf-employed
## GroupBlack_Woman:ethAsian:emp_stSelf-employed
## GroupBlight_Man:ethAsian:emp_stSelf-employed
## GroupBlight_Woman:ethAsian:emp_stSelf-employed
## GroupWasian_Man:ethAsian:emp_stSelf-employed
## GroupWasian_Woman:ethAsian:emp_stSelf-employed
## GroupWhite_Man:ethAsian:emp_stSelf-employed
## GroupWhite_Woman:ethAsian:emp_stSelf-employed
## GroupAsian_Woman:ethCaucasian:emp_stSelf-employed
## GroupBlack_Man:ethCaucasian:emp_stSelf-employed
## GroupBlack_Woman:ethCaucasian:emp_stSelf-employed
## GroupBlight_Man:ethCaucasian:emp_stSelf-employed
## GroupBlight_Woman:ethCaucasian:emp_stSelf-employed
## GroupWasian_Man:ethCaucasian:emp_stSelf-employed
## GroupWasian_Woman:ethCaucasian:emp_stSelf-employed
## GroupWhite_Man:ethCaucasian:emp_stSelf-employed

```

```
## GroupWhite_Woman:ethCaucasian:emp_stSelf-employed
## GroupAsian_Woman:ethLatino:emp_stSelf-employed
## GroupBlack_Man:ethLatino:emp_stSelf-employed
## GroupBlack_Woman:ethLatino:emp_stSelf-employed
## GroupBlight_Man:ethLatino:emp_stSelf-employed
## GroupBlight_Woman:ethLatino:emp_stSelf-employed
## GroupWasian_Man:ethLatino:emp_stSelf-employed
## GroupWasian_Woman:ethLatino:emp_stSelf-employed
## GroupWhite_Man:ethLatino:emp_stSelf-employed
## GroupWhite_Woman:ethLatino:emp_stSelf-employed
## GroupAsian_Woman:ethNative American:emp_stSelf-employed
## GroupBlack_Man:ethNative American:emp_stSelf-employed
## GroupBlack_Woman:ethNative American:emp_stSelf-employed
## GroupBlight_Man:ethNative American:emp_stSelf-employed
## GroupBlight_Woman:ethNative American:emp_stSelf-employed
## GroupWasian_Man:ethNative American:emp_stSelf-employed
## GroupWasian_Woman:ethNative American:emp_stSelf-employed
## GroupWhite_Man:ethNative American:emp_stSelf-employed
## GroupWhite_Woman:ethNative American:emp_stSelf-employed
## GroupAsian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupBlack_Man:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupBlack_Woman:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupBlight_Man:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupBlight_Woman:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupWasian_Man:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupWasian_Woman:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupWhite_Man:ethOther (including identifying as multiple):emp_stSelf-employed
## GroupWhite_Woman:ethOther (including identifying as multiple):emp_stSelf-employed
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 81.51 on 540 degrees of freedom
## Multiple R-squared:  0.1488, Adjusted R-squared:  0.04321
## F-statistic: 1.409 on 67 and 540 DF,  p-value: 0.02262
```

There are quite a few significant interactions in model2

Additional Analyses

```
# Recoding
new_df <- new_df %>%
  mutate(Gender = case_when(
    str_detect(Group, "Woman$") ~ "Female",
    str_detect(Group, "Man$") ~ "Male"
  ))

new_df <- new_df %>%
  mutate(Race = case_when(
    str_detect(Group, "^Asian") ~ "Asian",
    str_detect(Group, "^Black") ~ "Black",
    str_detect(Group, "^White") ~ "White",
    str_detect(Group, "^Blight") ~ "Biracial",
```

```

    str_detect(Group, "^Wasian") ~ "Biracial"
  ))

# Anova
anova_masculinity <- aov(masculinity ~ Race + Gender, data = new_df)
summary(anova_masculinity)

##              Df Sum Sq Mean Sq F value Pr(>F)
## Race          3    2.6  0.8562    1.056  0.367
## Gender         1    0.0  0.0227    0.028  0.867
## Residuals     603  488.8  0.8106

anova_femininity <- aov(femininity ~ Race + Gender, data = new_df)
summary(anova_femininity)

##              Df Sum Sq Mean Sq F value Pr(>F)
## Race          3    7.0  2.3442    2.252  0.0812 .
## Gender         1    0.1  0.0757    0.073  0.7874
## Residuals     603  627.6  1.0408
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

# Still not significant but the p = .08 for Race
TukeyHSD(anova_femininity)

##      Tukey multiple comparisons of means
##      95% family-wise confidence level
##
## Fit: aov(formula = femininity ~ Race + Gender, data = new_df)
##
## $Race
##              diff              lwr              upr              p adj
## Biracial-Asian  0.15934030 -0.13130714  0.44998773  0.4920681
## Black-Asian     0.24159836 -0.09631746  0.57951419  0.2547366
## White-Asian     -0.04674910 -0.38610553  0.29260734  0.9846668
## Black-Biracial  0.08225806 -0.21000830  0.37452443  0.8870714
## White-Biracial -0.20608939 -0.50002018  0.08784140  0.2713045
## White-Black     -0.28834746 -0.62909147  0.05239656  0.1299458
##
## $Gender
##              diff              lwr              upr              p adj
## Male-Female  0.0223218 -0.1401951  0.1848387  0.7874497

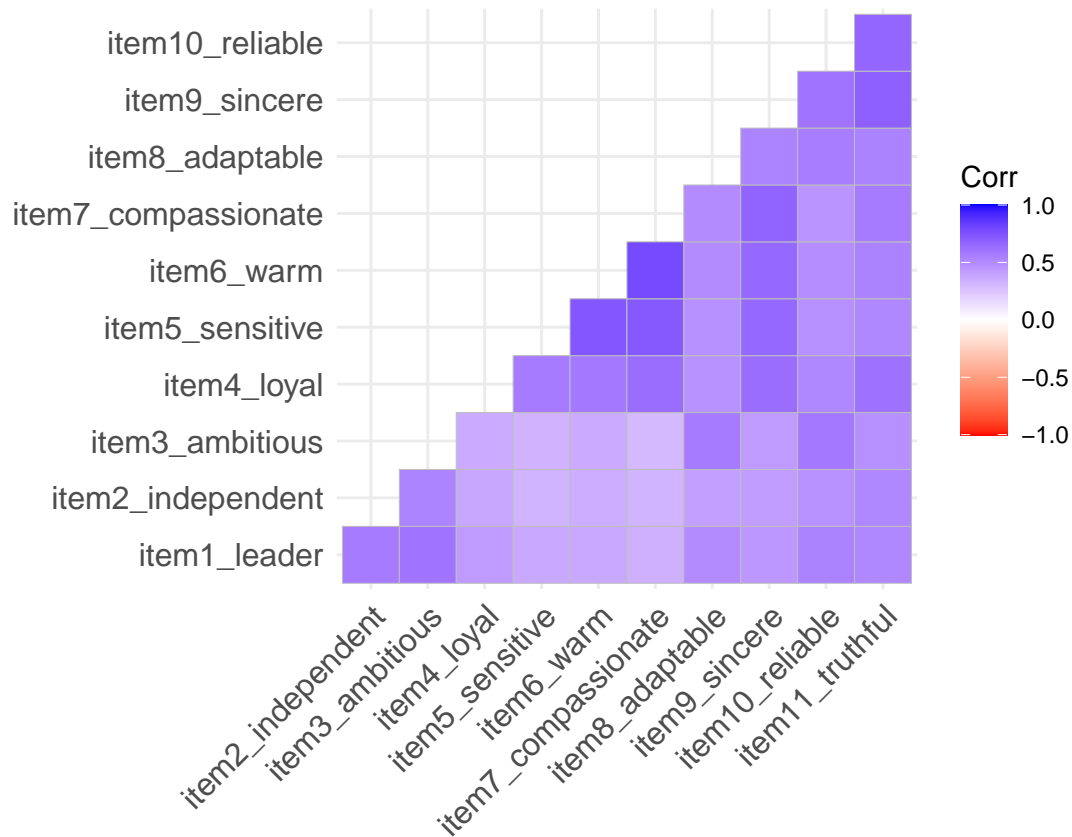
scales <- new_df[, c("item1_leader", "item2_independent", "item3_ambitious", "item4_loyal", "item5_sen
                    "item6_warm", "item7_compassionate", "item8_adaptable", "item9_sincere", "item10_
                    "item11_truthful")]
corr_matrix <- cor(scales, method = "pearson")
corr_matrix

##              item1_leader item2_independent item3_ambitious item4_loyal
## item1_leader            1.0000000            0.5723069            0.5970580            0.4270284

```

| | | | | |
|------------------------|-----------------|---------------|---------------------|-----------|
| ## item2_independent | 0.5723069 | 1.0000000 | 0.5303159 | 0.3796183 |
| ## item3_ambitious | 0.5970580 | 0.5303159 | 1.0000000 | 0.3618240 |
| ## item4_loyal | 0.4270284 | 0.3796183 | 0.3618240 | 1.0000000 |
| ## item5_sensitive | 0.3668706 | 0.3177872 | 0.3340273 | 0.5655615 |
| ## item6_warm | 0.3712535 | 0.3455004 | 0.3597623 | 0.5789757 |
| ## item7_compassionate | 0.3379075 | 0.3189013 | 0.3003633 | 0.6316077 |
| ## item8_adaptable | 0.5029899 | 0.4136576 | 0.5725477 | 0.4694597 |
| ## item9_sincere | 0.4453745 | 0.4228729 | 0.4280625 | 0.6306463 |
| ## item10_reliable | 0.5442136 | 0.4740099 | 0.5791148 | 0.5170769 |
| ## item11_truthful | 0.5158028 | 0.5217902 | 0.4803978 | 0.6080819 |
| ## | item5_sensitive | item6_warm | item7_compassionate | |
| ## item1_leader | 0.3668706 | 0.3712535 | 0.3379075 | |
| ## item2_independent | 0.3177872 | 0.3455004 | 0.3189013 | |
| ## item3_ambitious | 0.3340273 | 0.3597623 | 0.3003633 | |
| ## item4_loyal | 0.5655615 | 0.5789757 | 0.6316077 | |
| ## item5_sensitive | 1.0000000 | 0.7321898 | 0.7156697 | |
| ## item6_warm | 0.7321898 | 1.0000000 | 0.7818981 | |
| ## item7_compassionate | 0.7156697 | 0.7818981 | 1.0000000 | |
| ## item8_adaptable | 0.4775839 | 0.5027796 | 0.4950485 | |
| ## item9_sincere | 0.6548365 | 0.6467448 | 0.6736300 | |
| ## item10_reliable | 0.4757863 | 0.4854132 | 0.4597979 | |
| ## item11_truthful | 0.5158553 | 0.5410040 | 0.5704480 | |
| ## | item8_adaptable | item9_sincere | item10_reliable | |
| ## item1_leader | 0.5029899 | 0.4453745 | 0.5442136 | |
| ## item2_independent | 0.4136576 | 0.4228729 | 0.4740099 | |
| ## item3_ambitious | 0.5725477 | 0.4280625 | 0.5791148 | |
| ## item4_loyal | 0.4694597 | 0.6306463 | 0.5170769 | |
| ## item5_sensitive | 0.4775839 | 0.6548365 | 0.4757863 | |
| ## item6_warm | 0.5027796 | 0.6467448 | 0.4854132 | |
| ## item7_compassionate | 0.4950485 | 0.6736300 | 0.4597979 | |
| ## item8_adaptable | 1.0000000 | 0.5310877 | 0.5630516 | |
| ## item9_sincere | 0.5310877 | 1.0000000 | 0.6000589 | |
| ## item10_reliable | 0.5630516 | 0.6000589 | 1.0000000 | |
| ## item11_truthful | 0.5357582 | 0.6890958 | 0.6629769 | |
| ## | item11_truthful | | | |
| ## item1_leader | 0.5158028 | | | |
| ## item2_independent | 0.5217902 | | | |
| ## item3_ambitious | 0.4803978 | | | |
| ## item4_loyal | 0.6080819 | | | |
| ## item5_sensitive | 0.5158553 | | | |
| ## item6_warm | 0.5410040 | | | |
| ## item7_compassionate | 0.5704480 | | | |
| ## item8_adaptable | 0.5357582 | | | |
| ## item9_sincere | 0.6890958 | | | |
| ## item10_reliable | 0.6629769 | | | |
| ## item11_truthful | 1.0000000 | | | |

```
ggcorrplot(corr_matrix, method = 'square',
            type = 'lower',
            colors = c("red", "white", "blue"))
```



Hypothesis one

Perform ANOVA tests for each hypothesis

H1a: White men (neutral) will be rated more neutrally on both perceived masculinity and femininity compared to Black men (neutral)

#ANOVA with all groups

```
anova_h1a <- aov(masculinity ~ Group, data = new_df)
summary(anova_h1a)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    6.4   0.7061   0.871  0.551
## Residuals 598  485.0   0.8111
```

```
posthoc_h1a <- TukeyHSD(anova_h1a)
print(posthoc_h1a)
```

```
##      Tukey multiple comparisons of means
##      95% family-wise confidence level
##
```

```
## Fit: aov(formula = masculinity ~ Group, data = new_df)
##
## $Group
##
```

| | diff | lwr | upr | p adj |
|------------------------------|--------------|------------|-----------|-----------|
| ## Asian_Woman-Asian_Man | -0.105197133 | -0.6231535 | 0.4127593 | 0.9997503 |
| ## Black_Man-Asian_Man | -0.055197133 | -0.5731535 | 0.4627593 | 0.9999990 |
| ## Black_Woman-Asian_Man | 0.167025090 | -0.3509313 | 0.6849815 | 0.9907555 |
| ## Blight_Man-Asian_Man | 0.198242021 | -0.3134088 | 0.7098928 | 0.9672886 |
| ## Blight_Woman-Asian_Man | 0.107526882 | -0.4061664 | 0.6212202 | 0.9996798 |
| ## Wasian_Man-Asian_Man | 0.145331968 | -0.3663188 | 0.6569828 | 0.9963911 |
| ## Wasian_Woman-Asian_Man | 0.017025090 | -0.5009313 | 0.5349815 | 1.0000000 |
| ## White_Man-Asian_Man | -0.073971079 | -0.5964461 | 0.4485040 | 0.9999882 |
| ## White_Woman-Asian_Man | 0.100358423 | -0.4175980 | 0.6183148 | 0.9998310 |
| ## Black_Man-Asian_Woman | 0.050000000 | -0.4721847 | 0.5721847 | 0.9999996 |
| ## Black_Woman-Asian_Woman | 0.272222222 | -0.2499625 | 0.7944069 | 0.8197701 |
| ## Blight_Man-Asian_Woman | 0.303439153 | -0.2124916 | 0.8193699 | 0.6909297 |
| ## Blight_Woman-Asian_Woman | 0.212724014 | -0.3052324 | 0.7306804 | 0.9525641 |
| ## Wasian_Man-Asian_Woman | 0.250529101 | -0.2654017 | 0.7664599 | 0.8746048 |
| ## Wasian_Woman-Asian_Woman | 0.122222222 | -0.3999625 | 0.6444069 | 0.9992063 |
| ## White_Man-Asian_Woman | 0.031226054 | -0.4954410 | 0.5578931 | 1.0000000 |
| ## White_Woman-Asian_Woman | 0.205555556 | -0.3166291 | 0.7277402 | 0.9637523 |
| ## Black_Woman-Black_Man | 0.222222222 | -0.2999625 | 0.7444069 | 0.9409608 |
| ## Blight_Man-Black_Man | 0.253439153 | -0.2624916 | 0.7693699 | 0.8666967 |
| ## Blight_Woman-Black_Man | 0.162724014 | -0.3552324 | 0.6806804 | 0.9923509 |
| ## Wasian_Man-Black_Man | 0.200529101 | -0.3154017 | 0.7164599 | 0.9666134 |
| ## Wasian_Woman-Black_Man | 0.072222222 | -0.4499625 | 0.5944069 | 0.9999904 |
| ## White_Man-Black_Man | -0.018773946 | -0.5454410 | 0.5078931 | 1.0000000 |
| ## White_Woman-Black_Man | 0.155555556 | -0.3666291 | 0.6777402 | 0.9948352 |
| ## Blight_Man-Black_Woman | 0.031216931 | -0.4847138 | 0.5471477 | 1.0000000 |
| ## Blight_Woman-Black_Woman | -0.059498208 | -0.5774546 | 0.4584582 | 0.9999981 |
| ## Wasian_Man-Black_Woman | -0.021693122 | -0.5376239 | 0.4942376 | 1.0000000 |
| ## Wasian_Woman-Black_Woman | -0.150000000 | -0.6721847 | 0.3721847 | 0.9960703 |
| ## White_Man-Black_Woman | -0.240996169 | -0.7676632 | 0.2856709 | 0.9095806 |
| ## White_Woman-Black_Woman | -0.066666667 | -0.5888514 | 0.4555180 | 0.9999952 |
| ## Blight_Woman-Blight_Man | -0.090715139 | -0.6023659 | 0.4209357 | 0.9999197 |
| ## Wasian_Man-Blight_Man | -0.052910053 | -0.5625101 | 0.4566900 | 0.9999992 |
| ## Wasian_Woman-Blight_Man | -0.181216931 | -0.6971477 | 0.3347138 | 0.9830819 |
| ## White_Man-Blight_Man | -0.272213100 | -0.7926801 | 0.2482539 | 0.8168834 |
| ## White_Woman-Blight_Man | -0.097883598 | -0.6138144 | 0.4180472 | 0.9998582 |
| ## Wasian_Man-Blight_Woman | 0.037805086 | -0.4738457 | 0.5494559 | 1.0000000 |
| ## Wasian_Woman-Blight_Woman | -0.090501792 | -0.6084582 | 0.4274546 | 0.9999290 |
| ## White_Man-Blight_Woman | -0.181497961 | -0.7039730 | 0.3409771 | 0.9843308 |
| ## White_Woman-Blight_Woman | -0.007168459 | -0.5251249 | 0.5107879 | 1.0000000 |
| ## Wasian_Woman-Wasian_Man | -0.128306878 | -0.6442376 | 0.3876239 | 0.9987132 |
| ## White_Man-Wasian_Man | -0.219303047 | -0.7397700 | 0.3011639 | 0.9444254 |
| ## White_Woman-Wasian_Man | -0.044973545 | -0.5609043 | 0.4709572 | 0.9999998 |
| ## White_Man-Wasian_Woman | -0.090996169 | -0.6176632 | 0.4356709 | 0.9999354 |
| ## White_Woman-Wasian_Woman | 0.083333333 | -0.4388514 | 0.6055180 | 0.9999671 |
| ## White_Woman-White_Man | 0.174329502 | -0.3523375 | 0.7009965 | 0.9888495 |

```
anova_h1a <- aov(femininity ~ Group, data = new_df)
summary(anova_h1a)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
```

```
## Group          9      9.2    1.024    0.979    0.456
## Residuals     598    625.5    1.046
```

```
## no group differences in masculinity or femininity
```

```
#ANOVA with men only
library(dplyr)
# Add a new column "Group_Gender" based on the "Group" column
new_df <- new_df %>%
  mutate(Group_Gender = case_when(
    grepl("_Man", Group) ~ "Man",
    grepl("_Woman", Group) ~ "Woman",
    TRUE ~ "Other"
  ))

# Filter the dataframe to include only the "Men" groups
men_groups_df <- new_df %>%
  filter(Group_Gender == "Man")

# Perform a one-way ANOVA for masculinity
anova_men <- aov(masculinity ~ Group, data = men_groups_df)
summary(anova_men)
```

```
##              Df Sum Sq Mean Sq F value Pr(>F)
## Group         4    3.66  0.9156    1.072   0.37
## Residuals    301 256.97  0.8537
```

```
anova_men_item1 <- aov(item1_leader ~ Group, data = men_groups_df)
summary(anova_men_item1)
```

```
##              Df Sum Sq Mean Sq F value Pr(>F)
## Group         4    12.0   2.994    2.471 0.0447 *
## Residuals    301   364.6   1.211
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
# Perform Tukey post-hoc test for the one-way ANOVA
posthoc_men_item1 <- TukeyHSD(anova_men_item1)
print(posthoc_men_item1)
```

```
## Tukey multiple comparisons of means
## 95% family-wise confidence level
##
## Fit: aov(formula = item1_leader ~ Group, data = men_groups_df)
##
## $Group
##              diff              lwr              upr              p adj
## Black_Man-Asian_Man -0.013978495 -0.56098954  0.5330326 0.9999945
## Blight_Man-Asian_Man  0.435227855 -0.10512387  0.9755796 0.1785997
## Wasian_Man-Asian_Man  0.355862775 -0.18448895  0.8962145 0.3711805
## White_Man-Asian_Man  0.005561735 -0.54622142  0.5573449 0.9999999
## Blight_Man-Black_Man  0.449206349 -0.09566542  0.9940781 0.1601079
```

```
## Wasian_Man-Black_Man    0.369841270 -0.17503050 0.9147130 0.3398107
## White_Man-Black_Man     0.019540230 -0.53667008 0.5757505 0.9999804
## Wasian_Man-Blight_Man   -0.079365079 -0.61755105 0.4588209 0.9943349
## White_Man-Blight_Man    -0.429666119 -0.97932857 0.1199963 0.2038414
## White_Man-Wasian_Man    -0.350301040 -0.89996349 0.1993614 0.4056191
```

```
## no group differences in masculinity between males. anova shows group differences in item 1 (leadership)
##no group differences were found for any of the other items
```

```
# Perform a one-way ANOVA for femininity
anova_men <- aov(femininity ~ Group, data = men_groups_df)
summary(anova_men)
```

```
##              Df Sum Sq Mean Sq F value Pr(>F)
## Group         4      5.9    1.468    1.302  0.269
## Residuals    301    339.4    1.127
```

```
## no group differences in femininity between males.
```

```
# Perform Tukey post-hoc test for the one-way ANOVA
posthoc_men <- TukeyHSD(anova_men)
print(posthoc_men)
```

```
##      Tukey multiple comparisons of means
##      95% family-wise confidence level
##
## Fit: aov(formula = femininity ~ Group, data = men_groups_df)
##
## $Group
##              diff              lwr              upr              p adj
## Black_Man-Asian_Man    0.23225806 -0.2954515 0.7599676 0.7468401
## Blight_Man-Asian_Man    0.31400410 -0.2072811 0.8352893 0.4647387
## Wasian_Man-Asian_Man    0.20289299 -0.3183922 0.7241782 0.8227303
## White_Man-Asian_Man   -0.04532814 -0.5776414 0.4869851 0.9993371
## Blight_Man-Black_Man    0.08174603 -0.4438997 0.6073918 0.9930531
## Wasian_Man-Black_Man   -0.02936508 -0.5550108 0.4962807 0.9998754
## White_Man-Black_Man   -0.27758621 -0.8141704 0.2589980 0.6154168
## Wasian_Man-Blight_Man  -0.11111111 -0.6303070 0.4080847 0.9768975
## White_Man-Blight_Man   -0.35933224 -0.8895996 0.1709351 0.3415208
## White_Man-Wasian_Man   -0.24822113 -0.7784885 0.2820463 0.7008817
```

```
# H1b: White women (neutral) will be rated more neutrally on both perceived femininity and masculinity
```

```
# Filter the dataframe to include only the "Women" groups
women_groups_df <- new_df %>%
  filter(Group_Gender == "Woman")
# Perform a one-way ANOVA for masculinity and femininity
anova_women <- aov(masculinity ~ Group, data = women_groups_df)
summary(anova_women)
```

```
##              Df Sum Sq Mean Sq F value Pr(>F)
## Group         4      2.67    0.6679    0.87  0.482
## Residuals    297    228.08    0.7679
```



```
anova_women <- aov(femininity ~ Group, data = women_groups_df)
summary(anova_women)
```

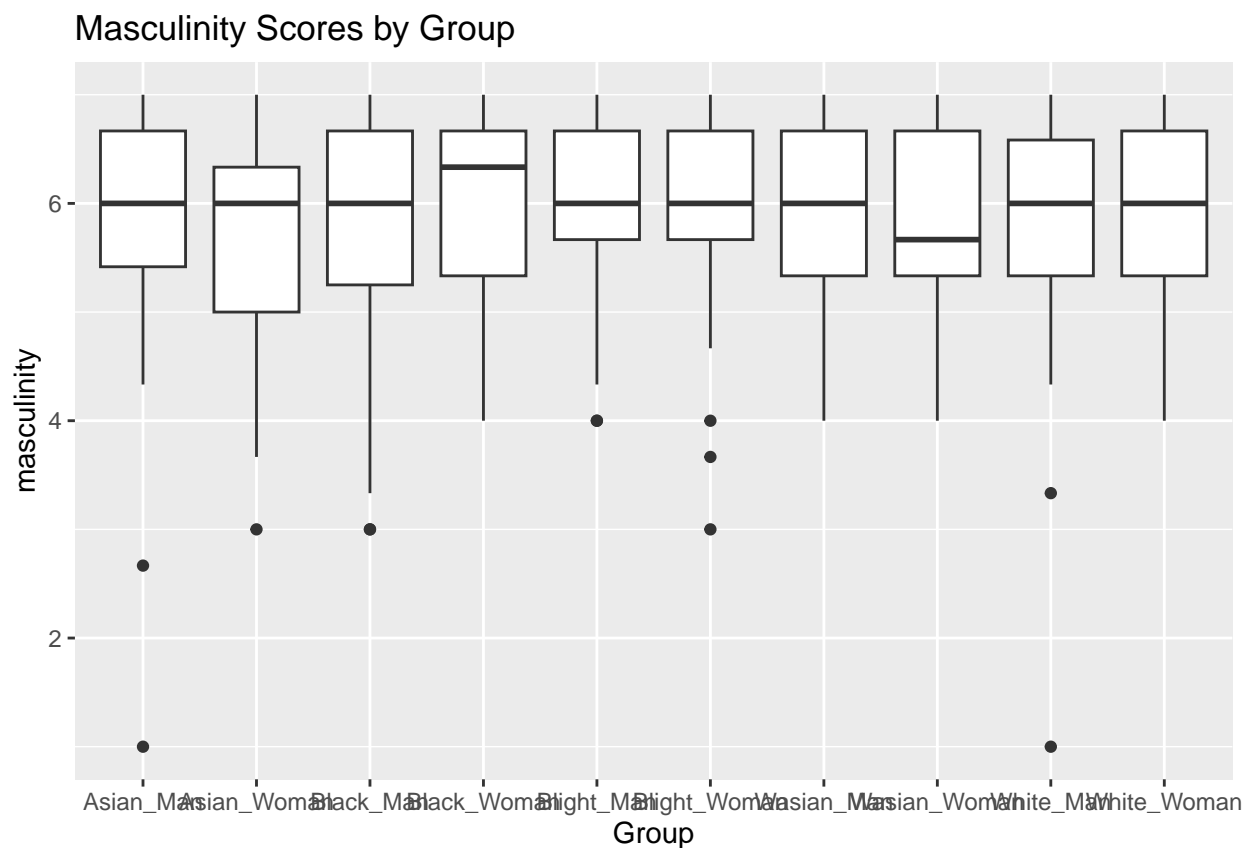
```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      4   3.26  0.8152   0.846  0.497
## Residuals 297 286.16  0.9635
```

```
#per item
anova_women_item1 <- aov(item1_leader ~ Group, data = women_groups_df)
summary(anova_women_item1)
```

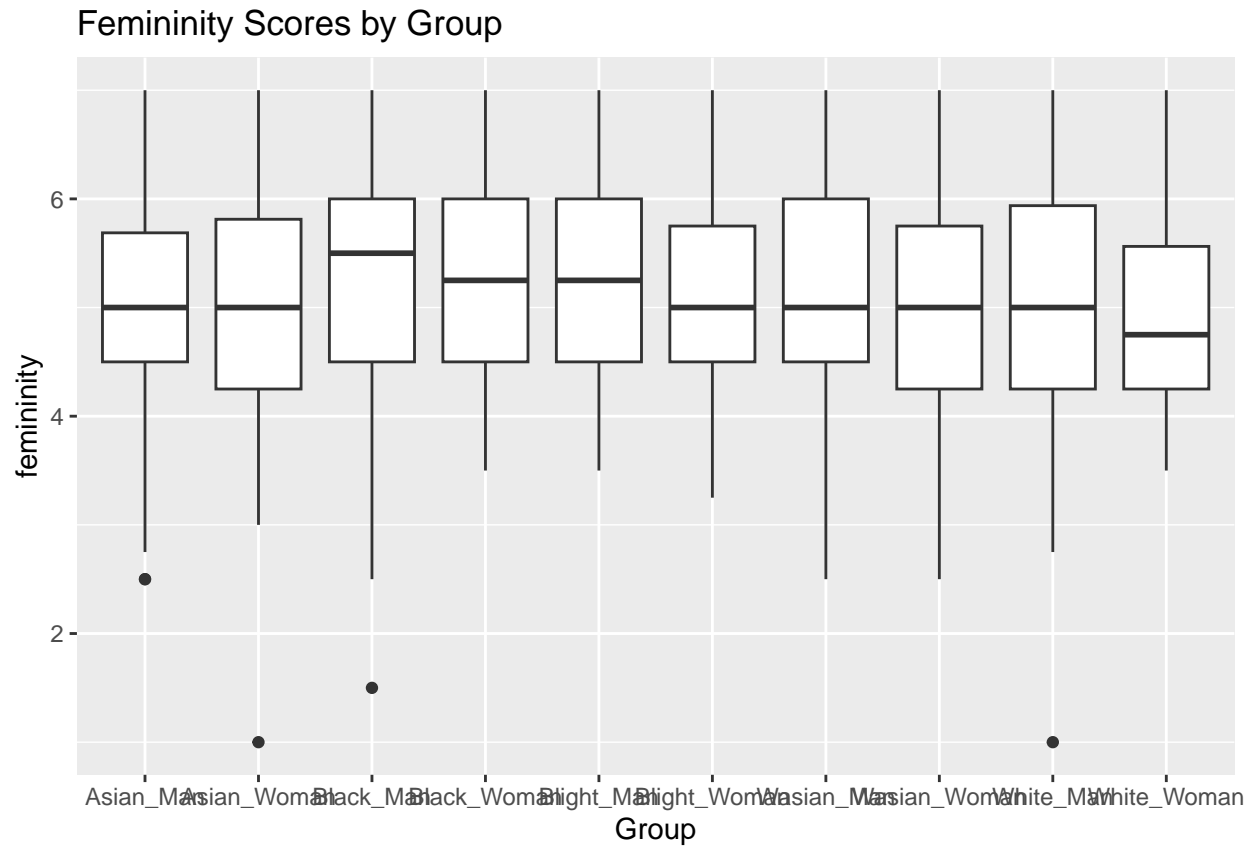
```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      4   3.84  0.9607   1.001  0.407
## Residuals 297 284.97  0.9595
```

##no group differences in masculinity or femininity between women. No differences were found for any of

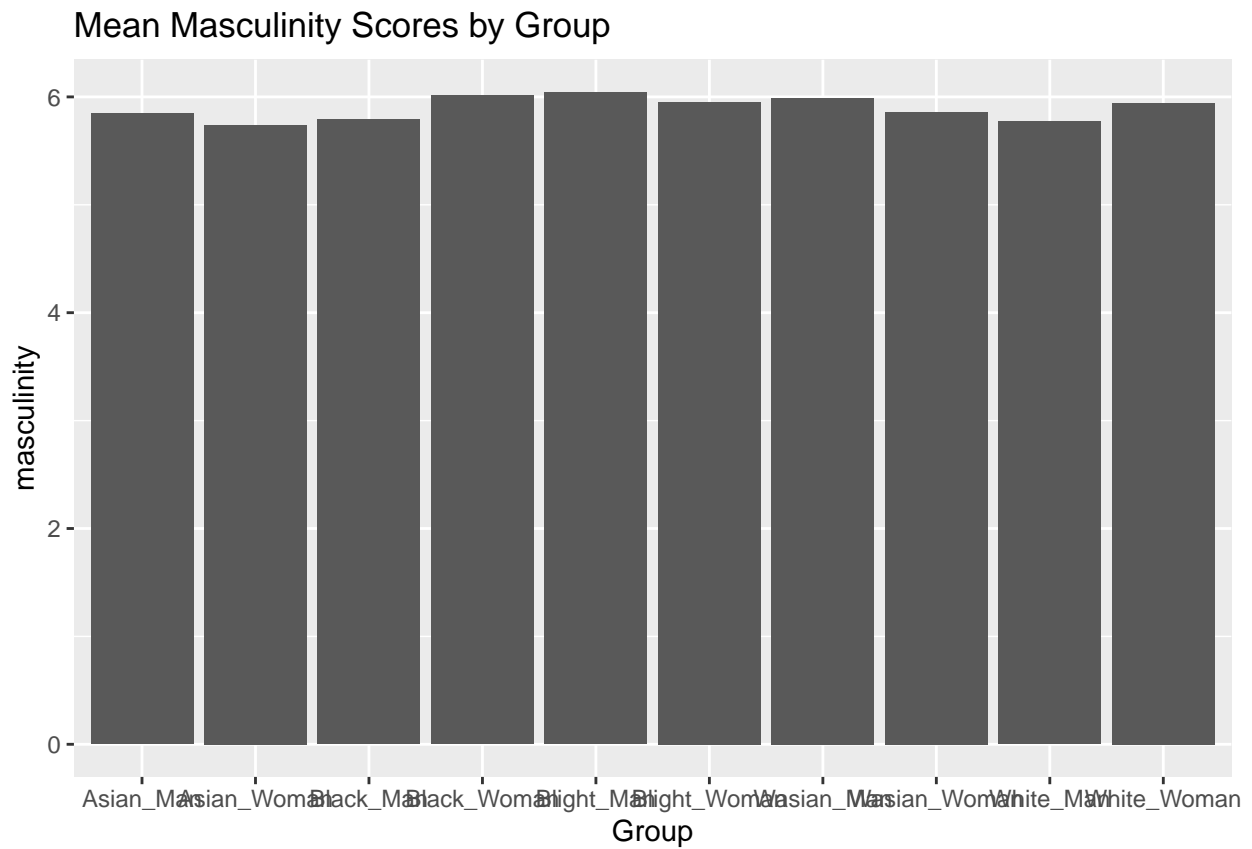
```
# Boxplot for masculinity
ggplot(new_df, aes(x = Group, y = masculinity)) +
  geom_boxplot() +
  labs(title = "Masculinity Scores by Group")
```



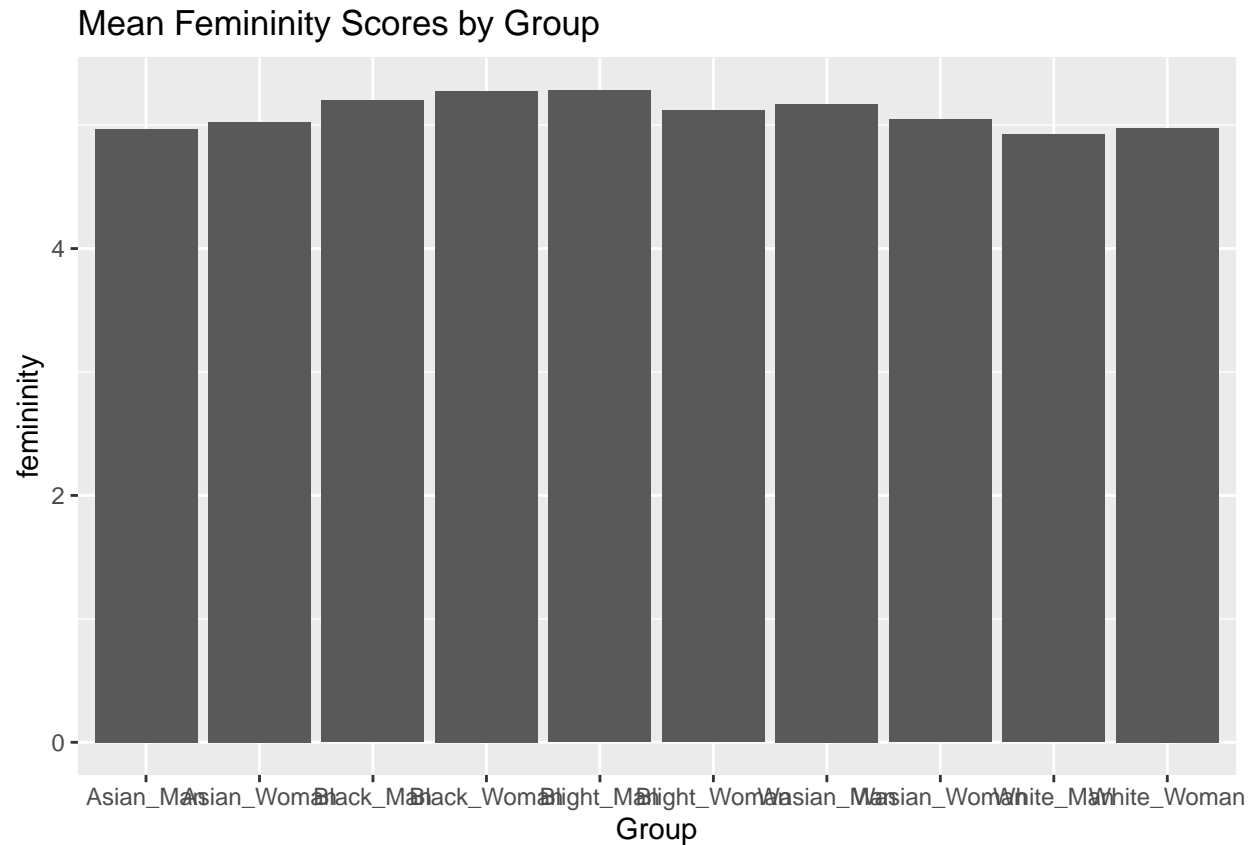
```
# Boxplot for femininity
ggplot(new_df, aes(x = Group, y = femininity)) +
  geom_boxplot() +
  labs(title = "Femininity Scores by Group")
```



```
# Bar plot for mean masculinity scores by group
ggplot(new_df, aes(x = Group, y = masculinity)) +
  geom_bar(stat = "summary", fun = "mean") +
  labs(title = "Mean Masculinity Scores by Group")
```



```
# Bar plot for mean femininity scores by group
ggplot(new_df, aes(x = Group, y = femininity)) +
  geom_bar(stat = "summary", fun = "mean") +
  labs(title = "Mean Femininity Scores by Group")
```



Hypothesis two

#H2a: Blight_man and Blight_woman will be rated more closely to Black_man and Black_woman compared to W

Masculinity: Compare Blight_man and Black_man with White_man

```
blight_man_masculinity <- subset(new_df, Group == "Blight_Man")$masculinity
```

```
black_man_masculinity <- subset(new_df, Group == "Black_Man")$masculinity
```

```
white_man_masculinity <- subset(new_df, Group == "White_Man")$masculinity
```

Perform t-tests

```
t.test(blight_man_masculinity, black_man_masculinity) # Blight_man vs. Black_man
```

```
##
```

```
## Welch Two Sample t-test
```

```
##
```

```
## data: blight_man_masculinity and black_man_masculinity
```

```
## t = 1.6198, df = 110.59, p-value = 0.1081
```

```
## alternative hypothesis: true difference in means is not equal to 0
```

```
## 95 percent confidence interval:
```

```
## -0.05661759 0.56349589
```

```
## sample estimates:
```

```
## mean of x mean of y
```

```
## 6.042328 5.788889
```

```
t.test(blight_man_masculinity, white_man_masculinity) # Blight_man vs. White_man
```

```
##  
## Welch Two Sample t-test  
##  
## data: blight_man_masculinity and white_man_masculinity  
## t = 1.6685, df = 103.85, p-value = 0.09822  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.05131365 0.59573985  
## sample estimates:  
## mean of x mean of y  
## 6.042328 5.770115
```

```
# Femininity: Compare Blight_man and Black_man with White_man  
blight_man_femininity <- subset(new_df, Group == "Blight_Man")$femininity  
black_man_femininity <- subset(new_df, Group == "Black_Man")$femininity  
white_man_femininity <- subset(new_df, Group == "White_Man")$femininity
```

```
# Perform t-tests
```

```
t.test(blight_man_femininity, black_man_femininity) # Blight_man vs. Black_man
```

```
##  
## Welch Two Sample t-test  
##  
## data: blight_man_femininity and black_man_femininity  
## t = 0.43007, df = 111.89, p-value = 0.668  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.2948695 0.4583616  
## sample estimates:  
## mean of x mean of y  
## 5.281746 5.200000
```

```
t.test(blight_man_femininity, white_man_femininity) # Blight_man vs. White_man
```

```
##  
## Welch Two Sample t-test  
##  
## data: blight_man_femininity and white_man_femininity  
## t = 1.9387, df = 111.22, p-value = 0.05507  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.007934318 0.726598795  
## sample estimates:  
## mean of x mean of y  
## 5.281746 4.922414
```

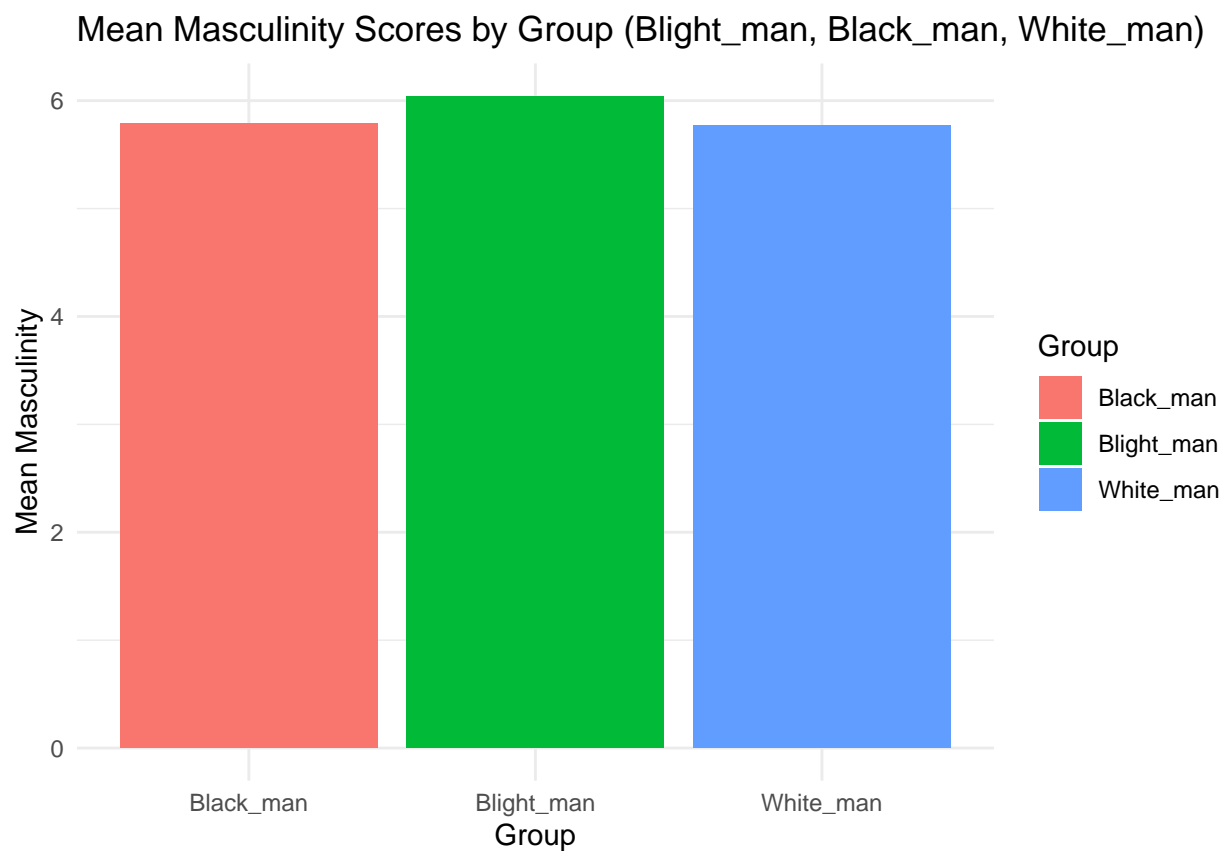
```
##Given that neither comparison is statistically significant, we cannot definitively conclude that Blig
```

```

# Create a data frame for the means
means_df <- data.frame(
  Group = c("Blight_man", "Black_man", "White_man"),
  Masculinity = c(mean(blight_man_masculinity), mean(black_man_masculinity), mean(white_man_masculinity)),
  Femininity = c(mean(blight_man_femininity), mean(black_man_femininity), mean(white_man_femininity))
)

# Create a grouped bar chart for masculinity
ggplot(means_df, aes(x = Group, y = Masculinity, fill = Group)) +
  geom_bar(stat = "identity", position = position_dodge(width = 0.8)) +
  labs(
    title = "Mean Masculinity Scores by Group (Blight_man, Black_man, White_man)",
    x = "Group",
    y = "Mean Masculinity"
  ) +
  theme_minimal()

```

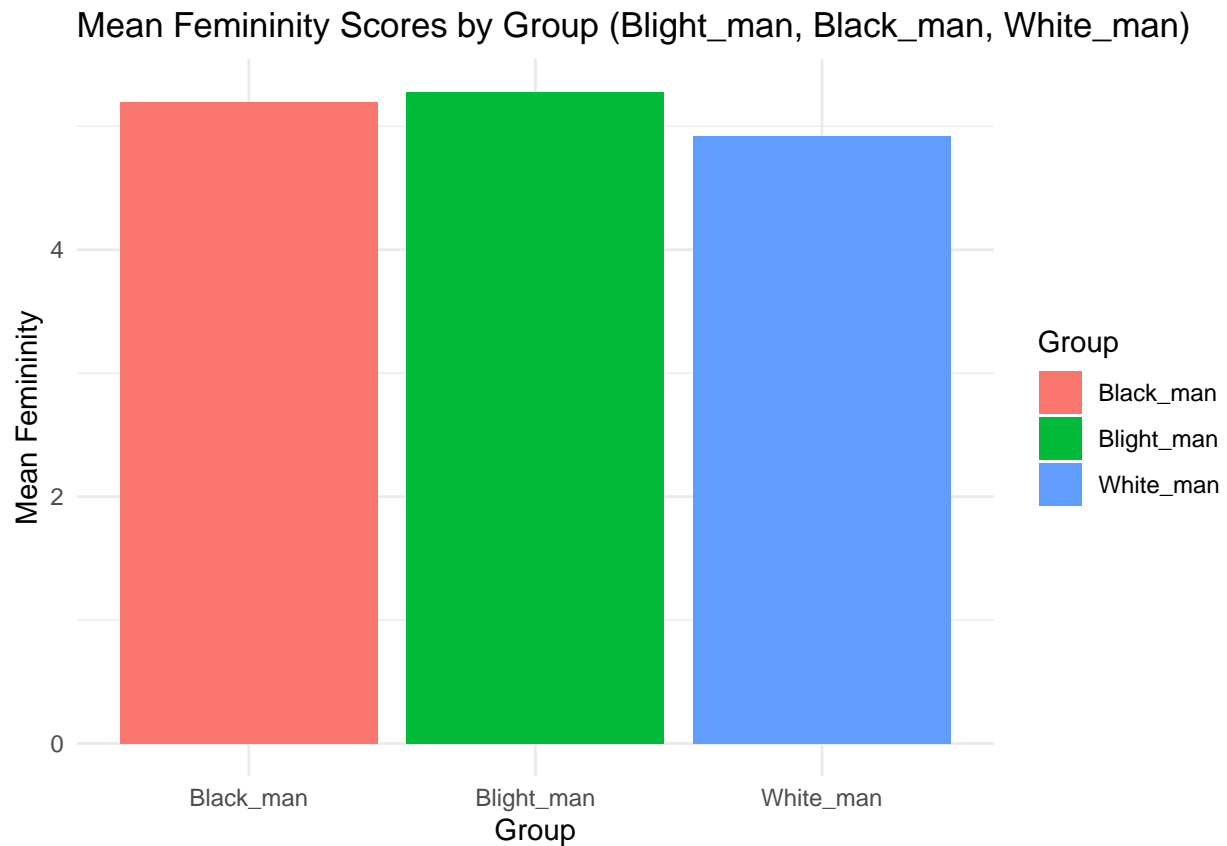


```

# Create a grouped bar chart for femininity
ggplot(means_df, aes(x = Group, y = Femininity, fill = Group)) +
  geom_bar(stat = "identity", position = position_dodge(width = 0.8)) +
  labs(
    title = "Mean Femininity Scores by Group (Blight_man, Black_man, White_man)",
    x = "Group",
    y = "Mean Femininity"
  ) +

```

```
theme_minimal()
```



```
# Masculinity: Compare Wasian_man and Asian_man with White_man
wasian_man_masculinity <- subset(new_df, Group == "Wasian_Man")$masculinity
asian_man_masculinity <- subset(new_df, Group == "Asian_Man")$masculinity
white_man_masculinity <- subset(new_df, Group == "White_Man")$masculinity
t.test(wasian_man_masculinity, asian_man_masculinity) # Blight_man vs. Black_man
```

```
##
## Welch Two Sample t-test
##
## data: wasian_man_masculinity and asian_man_masculinity
## t = 0.86439, df = 112.85, p-value = 0.3892
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.1877726 0.4784366
## sample estimates:
## mean of x mean of y
## 5.989418 5.844086
```

```
t.test(wasian_man_masculinity, white_man_masculinity) # Blight_man vs. White_man
```

```
##
## Welch Two Sample t-test
```

```
##
## data: wasian_man_masculinity and white_man_masculinity
## t = 1.3144, df = 107.75, p-value = 0.1915
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.1114252 0.5500312
## sample estimates:
## mean of x mean of y
## 5.989418 5.770115

# Femininity: Compare Wasian_man and Asian_man with White_man
wasian_man_femininity <- subset(new_df, Group == "Wasian_Man")$femininity
asian_man_femininity <- subset(new_df, Group == "Asian_Man")$femininity
white_man_femininity <- subset(new_df, Group == "White_Man")$femininity

# Perform t-tests
t.test(wasian_man_femininity, asian_man_femininity) # Wasian_man vs. Asian_man
```

```
##
## Welch Two Sample t-test
##
## data: wasian_man_femininity and asian_man_femininity
## t = 1.074, df = 122.95, p-value = 0.2849
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.1710577 0.5768437
## sample estimates:
## mean of x mean of y
## 5.170635 4.967742
```

```
t.test(wasian_man_femininity, white_man_femininity) # Wasian_man vs. White_man
```

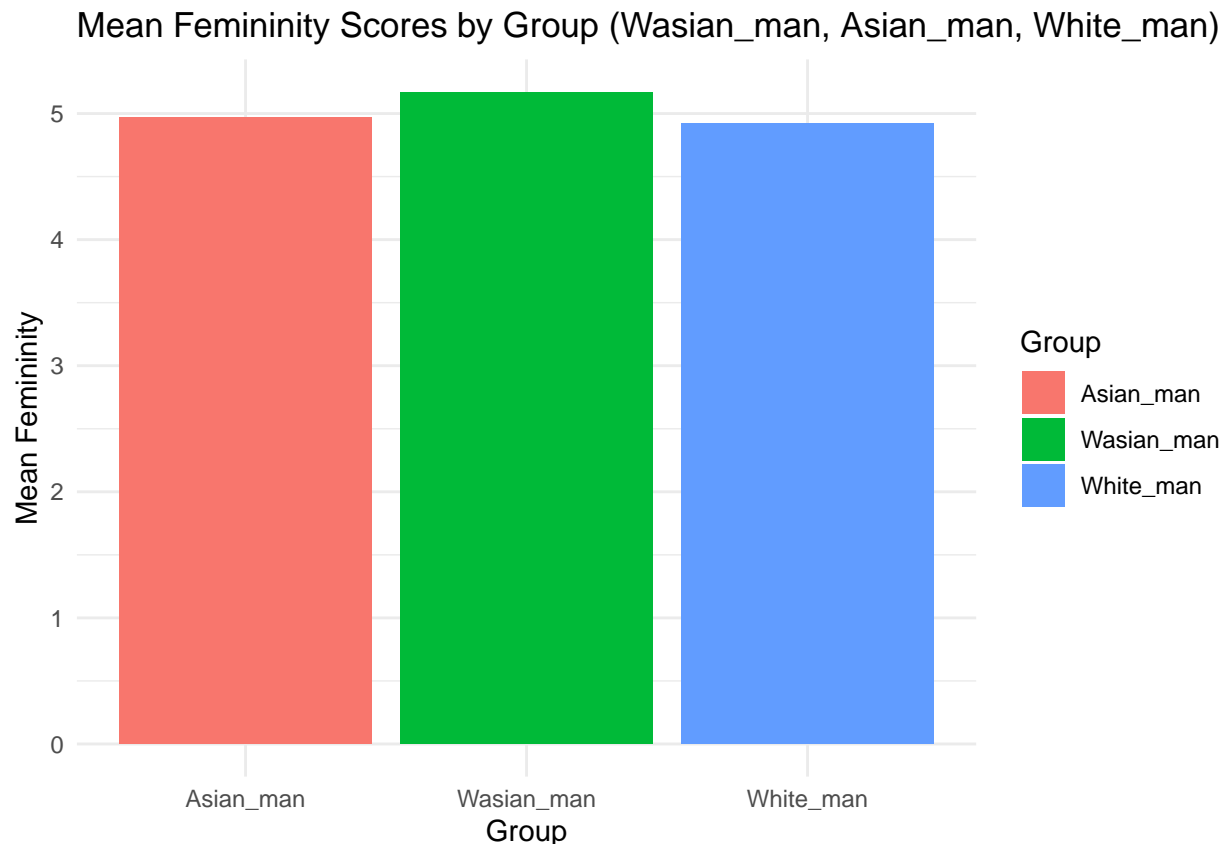
```
##
## Welch Two Sample t-test
##
## data: wasian_man_femininity and white_man_femininity
## t = 1.2631, df = 117.04, p-value = 0.2091
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.1409740 0.6374163
## sample estimates:
## mean of x mean of y
## 5.170635 4.922414
```

```
# Create a data frame for the means
means_df_femininity <- data.frame(
  Group = c("Wasian_man", "Asian_man", "White_man"),
  Femininity = c(mean(wasian_man_femininity), mean(asian_man_femininity), mean(white_man_femininity))
)

# Create a grouped bar chart for femininity
library(ggplot2)
```



```
ggplot(means_df_femininity, aes(x = Group, y = Femininity, fill = Group)) +
  geom_bar(stat = "identity", position = position_dodge(width = 0.8)) +
  labs(
    title = "Mean Femininity Scores by Group (Wasian_man, Asian_man, White_man)",
    x = "Group",
    y = "Mean Femininity"
  ) +
  theme_minimal()
```



```
##H2 for female groups:
# Masculinity: Compare Blight_woman and Black_woman with White_woman
blight_woman_masculinity <- subset(new_df, Group == "Blight_Woman")$masculinity
black_woman_masculinity <- subset(new_df, Group == "Black_Woman")$masculinity
white_woman_masculinity <- subset(new_df, Group == "White_Woman")$masculinity

# Perform t-tests
t.test(blight_woman_masculinity, black_woman_masculinity) # Blight_woman vs. Black_woman

##
## Welch Two Sample t-test
##
## data: blight_woman_masculinity and black_woman_masculinity
## t = -0.38739, df = 120, p-value = 0.6992
## alternative hypothesis: true difference in means is not equal to 0
```

```

## 95 percent confidence interval:
## -0.3635888 0.2445924
## sample estimates:
## mean of x mean of y
## 5.951613 6.011111

t.test(blight_woman_masculinity, white_woman_masculinity) # Blight_woman vs. White_woman

##
## Welch Two Sample t-test
##
## data: blight_woman_masculinity and white_woman_masculinity
## t = 0.047038, df = 119.97, p-value = 0.9626
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.2945669 0.3089038
## sample estimates:
## mean of x mean of y
## 5.951613 5.944444

# Femininity: Compare Blight_woman and Black_woman with White_woman
blight_woman_femininity <- subset(new_df, Group == "Blight_Woman")$femininity
black_woman_femininity <- subset(new_df, Group == "Black_Woman")$femininity
white_woman_femininity <- subset(new_df, Group == "White_Woman")$femininity

# Perform t-tests
t.test(blight_woman_femininity, black_woman_femininity) # Blight_woman vs. Black_woman

##
## Welch Two Sample t-test
##
## data: blight_woman_femininity and black_woman_femininity
## t = -0.96703, df = 119.96, p-value = 0.3355
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.4816919 0.1655629
## sample estimates:
## mean of x mean of y
## 5.116935 5.275000

t.test(blight_woman_femininity, white_woman_femininity) # Blight_woman vs. White_woman

##
## Welch Two Sample t-test
##
## data: blight_woman_femininity and white_woman_femininity
## t = 0.80812, df = 118.31, p-value = 0.4206
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.205864 0.489735
## sample estimates:
## mean of x mean of y
## 5.116935 4.975000

```

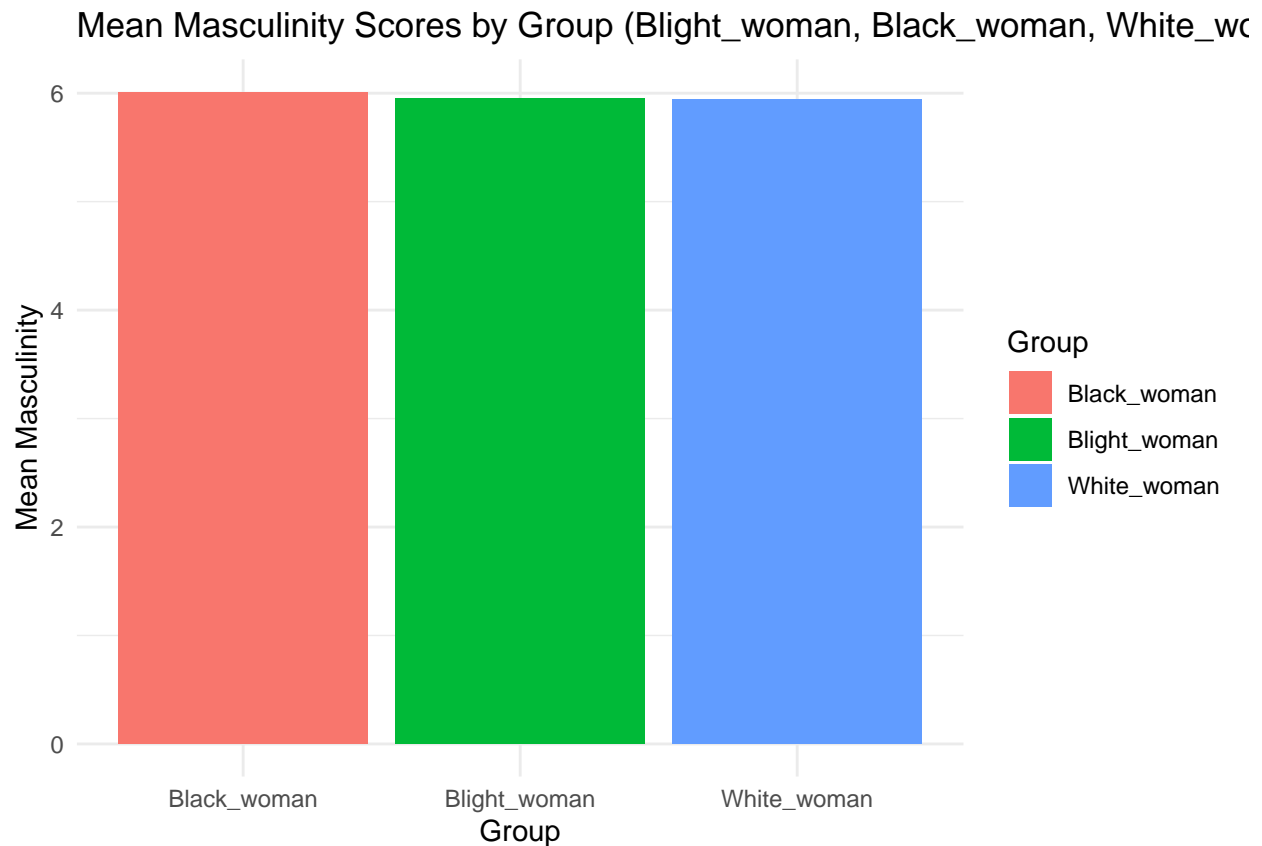
```

# Create a data frame for the means
means_df_women <- data.frame(
  Group = c("Blight_woman", "Black_woman", "White_woman"),
  Masculinity = c(mean(blight_woman_masculinity), mean(black_woman_masculinity), mean(white_woman_masculinity)),
  Femininity = c(mean(blight_woman_femininity), mean(black_woman_femininity), mean(white_woman_femininity))
)

# Create a grouped bar chart for masculinity

ggplot(means_df_women, aes(x = Group, y = Masculinity, fill = Group)) +
  geom_bar(stat = "identity", position = position_dodge(width = 0.8)) +
  labs(
    title = "Mean Masculinity Scores by Group (Blight_woman, Black_woman, White_woman)",
    x = "Group",
    y = "Mean Masculinity"
  ) +
  theme_minimal()

```



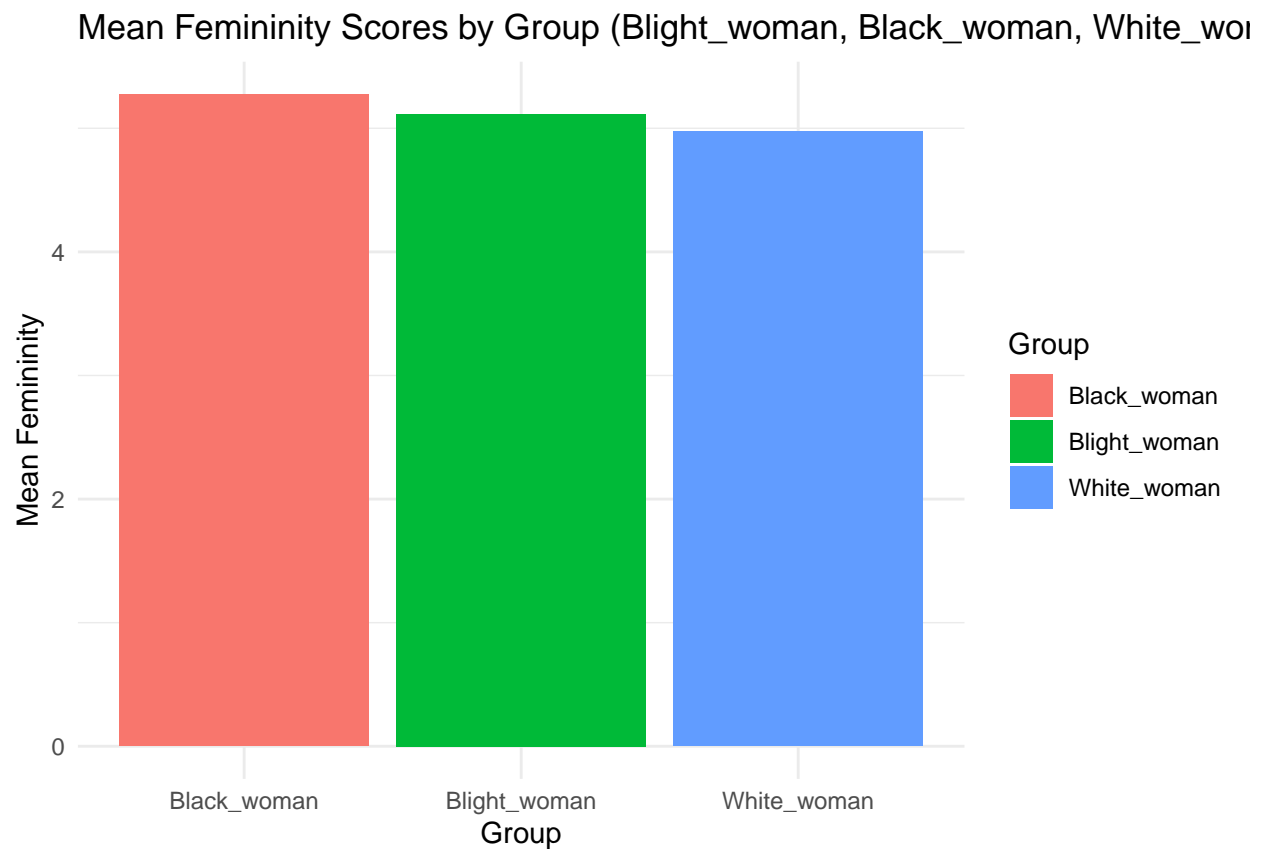
```

# Create a grouped bar chart for femininity

ggplot(means_df_women, aes(x = Group, y = Femininity, fill = Group)) +
  geom_bar(stat = "identity", position = position_dodge(width = 0.8)) +
  labs(
    title = "Mean Femininity Scores by Group (Blight_woman, Black_woman, White_woman)",
    x = "Group",
    y = "Mean Femininity"
  )

```

```
) +  
theme_minimal()
```



Hypothesis three

```
#H3b: The time taken for participants to rate the masculinity and femininity of biracial Black-White an  
# Filter the dataframe to include only the relevant groups  
response_time_df <- new_df %>%  
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",  
                      "Black_Man", "Black_Woman", "White_Man", "White_Woman",  
                      "Asian_Man", "Asian_Woman"))  
  
# Perform an analysis of variance (ANOVA) for response times  
response_time_anova <- aov(total_response_time ~ Group, data = response_time_df)  
  
# Check the summary of the ANOVA  
summary(response_time_anova)
```

```
##           Df  Sum Sq Mean Sq F value Pr(>F)  
## Group      9   42185    4687    0.672  0.735  
## Residuals 598 4172869    6978
```

```
# Perform a post-hoc test (e.g., Tukey HSD) to identify specific group differences
posthoc_response_time <- TukeyHSD(response_time_anova)
print(posthoc_response_time)
```

```
## Tukey multiple comparisons of means
## 95% family-wise confidence level
##
## Fit: aov(formula = total_response_time ~ Group, data = response_time_df)
##
## $Group
##
```

| | diff | lwr | upr | p adj |
|------------------------------|-------------|-----------|----------|-----------|
| ## Asian_Woman-Asian_Man | -4.7199731 | -52.76167 | 43.32172 | 0.9999995 |
| ## Black_Man-Asian_Man | 0.1373602 | -47.90433 | 48.17905 | 1.0000000 |
| ## Black_Woman-Asian_Man | 19.0355102 | -29.00618 | 67.07720 | 0.9621959 |
| ## Blight_Man-Asian_Man | -6.3274731 | -53.78431 | 41.12936 | 0.9999930 |
| ## Blight_Woman-Asian_Man | -9.3469839 | -56.99327 | 38.29930 | 0.9998127 |
| ## Wasian_Man-Asian_Man | 5.0347332 | -42.42210 | 52.49157 | 0.9999991 |
| ## Wasian_Woman-Asian_Man | -4.3029898 | -52.34468 | 43.73870 | 0.9999998 |
| ## White_Man-Asian_Man | 12.5375039 | -35.92330 | 60.99831 | 0.9982440 |
| ## White_Woman-Asian_Man | 3.0282435 | -45.01345 | 51.06994 | 1.0000000 |
| ## Black_Man-Asian_Woman | 4.8573333 | -43.57654 | 53.29121 | 0.9999994 |
| ## Black_Woman-Asian_Woman | 23.7554833 | -24.67839 | 72.18936 | 0.8677713 |
| ## Blight_Man-Asian_Woman | -1.6075000 | -49.46131 | 46.24631 | 1.0000000 |
| ## Blight_Woman-Asian_Woman | -4.6270108 | -52.66870 | 43.41468 | 0.9999996 |
| ## Wasian_Man-Asian_Woman | 9.7547063 | -38.09910 | 57.60852 | 0.9997426 |
| ## Wasian_Woman-Asian_Woman | 0.4169833 | -48.01689 | 48.85086 | 1.0000000 |
| ## White_Man-Asian_Woman | 17.2574770 | -31.59215 | 66.10710 | 0.9823935 |
| ## White_Woman-Asian_Woman | 7.7482167 | -40.68566 | 56.18209 | 0.9999664 |
| ## Black_Woman-Black_Man | 18.8981500 | -29.53573 | 67.33203 | 0.9657626 |
| ## Blight_Man-Black_Man | -6.4648333 | -54.31864 | 41.38898 | 0.9999922 |
| ## Blight_Woman-Black_Man | -9.4843441 | -57.52604 | 38.55735 | 0.9998026 |
| ## Wasian_Man-Black_Man | 4.8973730 | -42.95644 | 52.75118 | 0.9999993 |
| ## Wasian_Woman-Black_Man | -4.4403500 | -52.87423 | 43.99353 | 0.9999997 |
| ## White_Man-Black_Man | 12.4001437 | -36.44948 | 61.24977 | 0.9984873 |
| ## White_Woman-Black_Man | 2.8908833 | -45.54299 | 51.32476 | 1.0000000 |
| ## Blight_Man-Black_Woman | -25.3629833 | -73.21679 | 22.49083 | 0.8047842 |
| ## Blight_Woman-Black_Woman | -28.3824941 | -76.42419 | 19.65920 | 0.6852809 |
| ## Wasian_Man-Black_Woman | -14.0007770 | -61.85459 | 33.85303 | 0.9954872 |
| ## Wasian_Woman-Black_Woman | -23.3385000 | -71.77238 | 25.09538 | 0.8796676 |
| ## White_Man-Black_Woman | -6.4980063 | -55.34763 | 42.35162 | 0.9999931 |
| ## White_Woman-Black_Woman | -16.0072667 | -64.44114 | 32.42661 | 0.9889710 |
| ## Blight_Woman-Blight_Man | -3.0195108 | -50.47634 | 44.43732 | 1.0000000 |
| ## Wasian_Man-Blight_Man | 11.3622063 | -35.90442 | 58.62883 | 0.9990175 |
| ## Wasian_Woman-Blight_Man | 2.0244833 | -45.82933 | 49.87829 | 1.0000000 |
| ## White_Man-Blight_Man | 18.8649770 | -29.40958 | 67.13953 | 0.9654198 |
| ## White_Woman-Blight_Man | 9.3557167 | -38.49809 | 57.20953 | 0.9998179 |
| ## Wasian_Man-Blight_Woman | 14.3817171 | -33.07511 | 61.83855 | 0.9941322 |
| ## Wasian_Woman-Blight_Woman | 5.0439941 | -42.99770 | 53.08569 | 0.9999991 |
| ## White_Man-Blight_Woman | 21.8844878 | -26.57632 | 70.34529 | 0.9161450 |
| ## White_Woman-Blight_Woman | 12.3752274 | -35.66647 | 60.41692 | 0.9983027 |
| ## Wasian_Woman-Wasian_Man | -9.3377230 | -57.19153 | 38.51609 | 0.9998208 |
| ## White_Man-Wasian_Man | 7.5027707 | -40.77178 | 55.77732 | 0.9999738 |
| ## White_Woman-Wasian_Man | -2.0064897 | -49.86030 | 45.84732 | 1.0000000 |

```
## White_Man-Wasian_Woman      16.8404937 -32.00913 65.69012 0.9851423
## White_Woman-Wasian_Woman     7.3312333 -41.10264 55.76511 0.9999791
## White_Woman-White_Man       -9.5092603 -58.35889 39.34037 0.9998243
```

```
##no group differences in total response time.
```

```
#Testing for response time per item:
```

```
# Filter the dataframe to include only the relevant groups and response times for item1_leader
response_time_item1_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
                     "Black_Man", "Black_Woman", "White_Man", "White_Woman",
                     "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_leader)

# Perform an analysis of variance (ANOVA) for response times of item1_leader
response_time_item1_anova <- aov(timing_leader ~ Group, data = response_time_item1_df)
# Check the summary of the ANOVA
summary(response_time_item1_anova)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    2412    268.0   1.244  0.265
## Residuals 598 128773    215.3
```

```
# Filter the dataframe to include only the relevant groups and response times for item2_independent
response_time_item2_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
                     "Black_Man", "Black_Woman", "White_Man", "White_Woman",
                     "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_independent)
```

```
# Perform an analysis of variance (ANOVA) for response times of item2_independent
response_time_item2_anova <- aov(timing_independent ~ Group, data = response_time_item2_df)

# Check the summary of the ANOVA
summary(response_time_item2_anova)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    1278    142.0   0.858  0.563
## Residuals 598 98953    165.5
```

```
# Filter the dataframe to include only the relevant groups and response times for item3_ambitious
response_time_item3_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
                     "Black_Man", "Black_Woman", "White_Man", "White_Woman",
                     "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_ambitious)
```

```
# Perform an analysis of variance (ANOVA) for response times of item3_ambitious
response_time_item3_anova <- aov(timing_ambitious ~ Group, data = response_time_item3_df)

# Check the summary of the ANOVA
summary(response_time_item3_anova)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   3377   375.3   1.036   0.41
## Residuals 598 216653   362.3
```

```
# Filter the dataframe to include only the relevant groups and response times for item4_loyal
response_time_item4_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
                     "Black_Man", "Black_Woman", "White_Man", "White_Woman",
                     "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_loyal)

# Perform an analysis of variance (ANOVA) for response times of item4_loyal
response_time_item4_anova <- aov(timing_loyal ~ Group, data = response_time_item4_df)

# Check the summary of the ANOVA
summary(response_time_item4_anova)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9   1060   117.74   1.186   0.301
## Residuals 598 59385    99.31
```

```
# Filter the dataframe to include only the relevant groups and response times for item5_sensitive
response_time_item5_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
                     "Black_Man", "Black_Woman", "White_Man", "White_Woman",
                     "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_sensitive)

# Perform an analysis of variance (ANOVA) for response times of item5_sensitive
response_time_item5_anova <- aov(timing_sensitive ~ Group, data = response_time_item5_df)

# Check the summary of the ANOVA
summary(response_time_item5_anova)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9  18466   2052   0.794   0.622
## Residuals 598 1545113   2584
```

```
# Filter the dataframe to include only the relevant groups and response times for item6_warm
response_time_item6_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
                     "Black_Man", "Black_Woman", "White_Man", "White_Woman",
                     "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_warm)

# Perform an analysis of variance (ANOVA) for response times of item6_warm
response_time_item6_anova <- aov(timing_warm ~ Group, data = response_time_item6_df)

# Check the summary of the ANOVA
summary(response_time_item6_anova)
```

```
##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9    921   102.3   0.65   0.754
## Residuals 598 94059   157.3
```

```

# Filter the dataframe to include only the relevant groups and response times for item7_ompassionate
response_time_item7_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman", "Wasian_Man", "Wasian_Woman",
    "Black_Man", "Black_Woman", "White_Man", "White_Woman",
    "Asian_Man", "Asian_Woman")) %>%
  dplyr::select(Group, timing_compassionate)

# Perform an analysis of variance (ANOVA) for response times of item7_compassionate
response_time_item7_anova <- aov(timing_compassionate ~ Group, data = response_time_item7_df)

# Check the summary of the ANOVA
summary(response_time_item7_anova)

```

```

##           Df Sum Sq Mean Sq F value Pr(>F)
## Group      9      287    31.87   0.332  0.964
## Residuals 598   57370    95.94

```

##no group differences in response time for any of the items (both masculine and feminine)

##Hypothesis 4:

##H4a: Participants will be more likely to rapidly categorize biracial individuals (i.e. Blight_man, Bli

```

##First, Black groups
# Filter the dataframe to include only Blight_Man and Blight_Woman and response times
blight_response_time_df <- new_df %>%
  filter(Group %in% c("Blight_Man", "Blight_Woman")) %>%
  dplyr::select(Group, item12_race, timing_race)

# Define the categories for "Black (Monoracial)" and "Biracial (Black-White)"
monoracial_category <- "Black (Monoracial)"
biracial_category <- "Biracial (Black-White)"

# Separate response times for the two categories
monoracial_response_time <- blight_response_time_df %>%
  filter(item12_race == monoracial_category) %>%
  dplyr::select(timing_race)

biracial_response_time <- blight_response_time_df %>%
  filter(item12_race == biracial_category) %>%
  dplyr::select(timing_race)

# Perform t-tests to compare response times
t_test_blight_man_monoracial_vs_biracial <- t.test(monoracial_response_time$timing_race, biracial_respon

# Print the results of the t-tests
print(t_test_blight_man_monoracial_vs_biracial)

```

```

##
## Welch Two Sample t-test
##
## data: monoracial_response_time$timing_race and biracial_response_time$timing_race

```



```
## t = -2.0673, df = 32.86, p-value = 0.04665
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -37.4507736 -0.2966639
## sample estimates:
## mean of x mean of y
## 13.35200 32.22572
```

##participants took significantly less time to categorize Blight_Man and Blight_Woman as "Black (Monoracial)"

```
## Asian groups:
# Filter the dataframe to include only Wasian_Man and Wasian_Woman and response times
wasian_response_time_df <- new_df %>%
  filter(Group %in% c("Wasian_Man", "Wasian_Woman")) %>%
  dplyr::select(Group, item12_race, timing_race)

# Define the categories for "Asian (Monoracial)" and "Biracial (Asian-White)"
monoracial_category <- "Asian (Monoracial)"
biracial_category <- "Biracial (Asian-White)"

# Separate response times for the two categories
monoracial_response_time <- wasian_response_time_df %>%
  filter(item12_race == monoracial_category) %>%
  dplyr::select(timing_race)

biracial_response_time <- wasian_response_time_df %>%
  filter(item12_race == biracial_category) %>%
  dplyr::select(timing_race)

# Perform t-tests to compare response times
t_test_wasian_monoracial_vs_biracial <- t.test(monoracial_response_time$timing_race, biracial_response_time$timing_race)

# Print the results of the t-tests
print(t_test_wasian_monoracial_vs_biracial)
```

```
##
## Welch Two Sample t-test
##
## data: monoracial_response_time$timing_race and biracial_response_time$timing_race
## t = -4.9146, df = 77.982, p-value = 4.814e-06
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -10.192101 -4.315321
## sample estimates:
## mean of x mean of y
## 10.32038 17.57409
```

##participants took significantly less time to categorize individuals as "Asian (Monoracial)" compared to "Black (Monoracial)"
#visualization

```
##For Black groups:
# Load the ggplot2 library for data visualization
library(ggplot2)
```

```

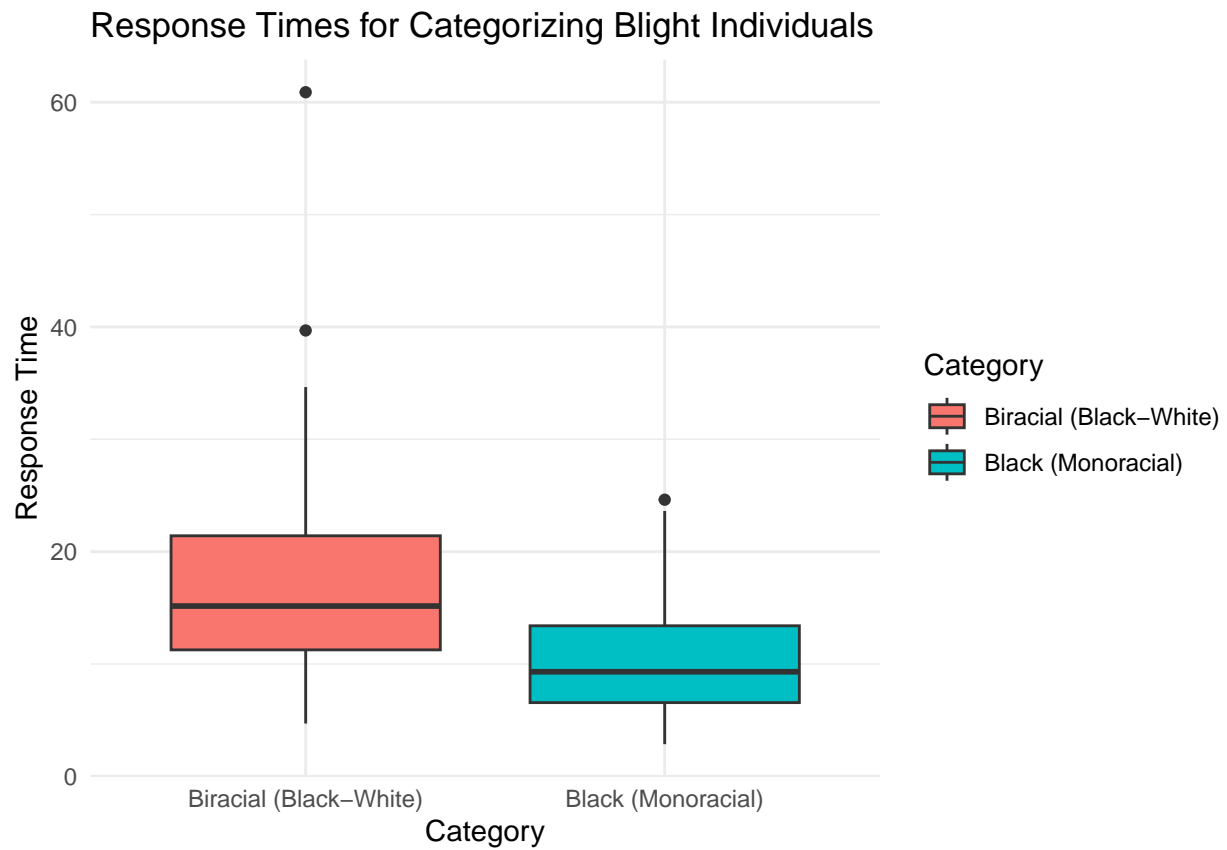
# Create separate data frames for monoracial and biracial response times
monoracial_df <- data.frame(
  Category = "Black (Monoracial)",
  ResponseTime = monoracial_response_time$timing_race
)

biracial_df <- data.frame(
  Category = "Biracial (Black-White)",
  ResponseTime = biracial_response_time$timing_race
)

# Combine the data frames
response_time_df <- rbind(monoracial_df, biracial_df)

# Create a box plot
ggplot(response_time_df, aes(x = Category, y = ResponseTime, fill = Category)) +
  geom_boxplot() +
  labs(
    title = "Response Times for Categorizing Blight Individuals",
    x = "Category",
    y = "Response Time"
  ) +
  theme_minimal()

```



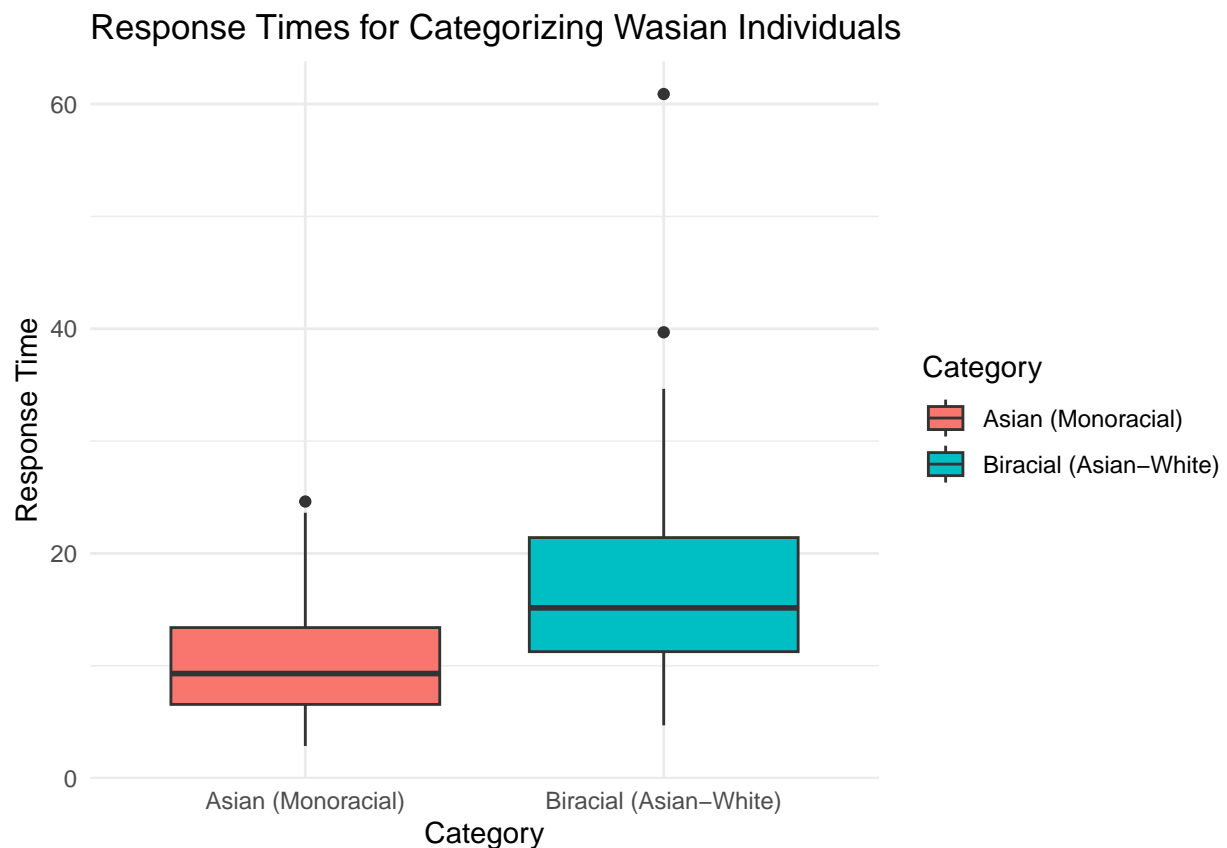
```
##for Asian groups

# Create separate data frames for monoracial and biracial response times
monoracial_df <- data.frame(
  Category = "Asian (Monoracial)",
  ResponseTime = monoracial_response_time$timing_race
)

biracial_df <- data.frame(
  Category = "Biracial (Asian-White)",
  ResponseTime = biracial_response_time$timing_race
)

# Combine the data frames
response_time_df <- rbind(monoracial_df, biracial_df)

# Create a box plot
ggplot(response_time_df, aes(x = Category, y = ResponseTime, fill = Category)) +
  geom_boxplot() +
  labs(
    title = "Response Times for Categorizing Wasian Individuals",
    x = "Category",
    y = "Response Time"
  ) +
  theme_minimal()
```



Manipulation check

```
# Create a contingency table
contingency_table <- table(new_df$Group, new_df$item12_race)
```

```
# Perform a chi-squared test of independence
chi_squared_test <- chisq.test(contingency_table)
```

```
## Warning in chisq.test(contingency_table): Chi-squared approximation may be
## incorrect
```

```
# Print the results of the chi-squared test
print(chi_squared_test)
```

```
##
## Pearson's Chi-squared test
##
## data: contingency_table
## X-squared = 1203.6, df = 36, p-value < 2.2e-16
```

```
##participants' categorizations in the 'item12_race' column were not independent of their assigned group
```

```
#Counts for each group
## Blight_woman
# Filter the dataframe to include only the "Blight_Woman" group
blight_woman_responses <- subset(new_df, Group == "Blight_Woman")
# Create a table of responses for the "item12_race" column
response_counts <- table(blight_woman_responses$item12_race)
# Convert the table to a data frame
response_counts_df <- as.data.frame(response_counts)
# Rename the columns for better clarity
colnames(response_counts_df) <- c("Response", "Count")
# Print the breakdown of response counts
print(response_counts_df)
```

```
##           Response Count
## 1      Asian (Monoracial)    3
## 2 Biracial (Asian-White)   26
## 3 Biracial (Black-White)   10
## 4      Black (Monoracial)    0
## 5           White         23
```

```
##surprisingly, most blight-women were categorized as Biracial (Asian-White) (26) or White (23). Safe to
```

```
## Blight_man
# Filter the dataframe to include only the "Blight_Woman" group
blight_man_responses <- subset(new_df, Group == "Blight_Man")
# Create a table of responses for the "item12_race" column
response_counts <- table(blight_man_responses$item12_race)
# Convert the table to a data frame
response_counts_df <- as.data.frame(response_counts)
```

```
# Rename the columns for better clarity
colnames(response_counts_df) <- c("Response", "Count")
# Print the breakdown of response counts
print(response_counts_df)
```

```
##              Response Count
## 1      Asian (Monoracial)    1
## 2 Biracial (Asian-White)    1
## 3 Biracial (Black-White)   22
## 4      Black (Monoracial)   38
## 5              White       1
```

##Most blight-men were categorized as Black monoracial (38) or Biracial Black-White (22). Manipulation

```
## Wasian_man
# Filter the dataframe to include only the "Wasian_Man" group
wasian_man_responses <- subset(new_df, Group == "Wasian_Man")
# Create a table of responses for the "item12_race" column
response_counts <- table(wasian_man_responses$item12_race)
# Convert the table to a data frame
response_counts_df <- as.data.frame(response_counts)
# Rename the columns for better clarity
colnames(response_counts_df) <- c("Response", "Count")
# Print the breakdown of response counts
print(response_counts_df)
```

```
##              Response Count
## 1      Asian (Monoracial)   29
## 2 Biracial (Asian-White)   28
## 3 Biracial (Black-White)    2
## 4      Black (Monoracial)    1
## 5              White        3
```

##Most wasian-men were categorized as Asian monoracial (29) or Biracial Asian-White (28).

```
## Wasian_woman
# Filter the dataframe to include only the "Wasian_Woman" group
wasian_woman_responses <- subset(new_df, Group == "Wasian_Woman")
# Create a table of responses for the "item12_race" column
response_counts <- table(wasian_woman_responses$item12_race)
# Convert the table to a data frame
response_counts_df <- as.data.frame(response_counts)
# Rename the columns for better clarity
colnames(response_counts_df) <- c("Response", "Count")
# Print the breakdown of response counts
print(response_counts_df)
```

```
##              Response Count
## 1      Asian (Monoracial)   31
## 2 Biracial (Asian-White)   25
## 3 Biracial (Black-White)    0
## 4      Black (Monoracial)    1
## 5              White        3
```

##Most wasian-women were categorized as Asian monoracial (31) or Biracial Asian-White (25).